This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

82872

THE UNIVERSITY OF MICHIGAN LIBRARIES
1817

THE

LONDON MEDICAL GAZETTE,

OR

Journal of Practical Medicine.

NEW SERIES.

VOL. III.

LONDON:
PRINTED FOR
LONGMAN, BROWN, GREEN, AND LONGMANS,
PATERNOSTER ROW.
1846.

970.--

LONDON:
PRINTED BY WILSON AND OGILVY,
57, Skinner Street, Snowhill.

Lectures.

A COURSE OF LECTURES ON ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

BY PROF. FARADAY, D.C.L., F.R.S., &c.

LECTURE II.—May 2, 1846.

The two kinds of electricity—repulsion—the electroscope—transference of electricity—insulated ball—destruction of the two forces—difference between heat and electricity — insulation — conduction — relative conducting powers of brass, wood, and glass—effect of humidity on the conduction of bodies.—Conducting power of metals.—Velocity of electricity compared with other velocities.—Accumulation of electricity. — Induction.—Properties of induced electricity.—Tendency of electricity to the exterior of bodies—transferred from the inside to the outside of a vessel.—Principle of the Leyden jar — mode of construction.—Discharge of electricity—sparks. — Electricity not self-luminous — its action on metallic conductors.—Effects of lighting—ignition of bodies—cold fusion.—Lightning conductors. — Electricity passes from every portion of a conductor.

I SHALL presume so far upon your attention at our last meeting, as to believe that you have a very good general knowledge of the nature and first appearance of the power we have to consider in this lecture, or at least one cause of it—*Electricity*. Remember, that it appears suddenly in substances of various kinds; it may be excited and removed at pleasure. In common language, there are two kinds of this power; they are both distinguished by a highly attractive and repulsive force.

I will recal this to your minds by two or three experiments, to make it clearer, before we proceed further in our examination. I shall give an experiment on a larger scale than before. I vary the experiments in order that I may fix your attention by phenomena diverse in appearance, but alike in their character. Here is a very pretty and a very good experiment to show the repulsion of bodies. I am building up the apparatus on a large scale, because we have power and surface enough to prove that the same things always happen, go where you like, to similar bodies. Here is a small silk balloon, which I have made light on purpose; and I have placed it upon the surface of this metallic apparatus, which you observe is in connexion with the machine. When it is electrified you will find the effect of repulsion—the balloon will be raised or repelled from the surface. The moment it becomes in the same state as the machine, it is repelled, and becomes, as you perceive, a floating ball. I will give another experiment of the same kind, but in a form so different that it will immediately carry your attention to certain kinds of operation in which we find this principle to serve very important purposes. Here is the arrangement; it consists of a stick surmounted by a tassel of thin paper cut in long strips. When power is conducted from the machine through the stick, the whole of the matter is electrified, and the general effect of electricity will appear. When the strips of paper forming the tassel are left free to move, each part does move, and a motion takes place which must be referred to the repulsion of one strip from the other. If I put a rod between the strips, and take away the electricity, we then get evidence of attraction, as they now collapse. In this experiment, which is just the same as that which was exhibited with glass, we find the results are the same. When I take a glass rod, I first show attraction by the first action of electricity; but after that we have repulsion. If one part of a glass tube is more strongly electrified than the other, it overcomes the weaker part, and draws its electricity towards it. If I take sealing-wax, or shell-lac, we get the opposite effect. If you act lightly upon a portion of matter suspended by silk, you may assume that there will be attraction and repulsion, from the same states of electricity. Here is an instrument, which you saw last week, and which is a very fine instrument for us in our experiments, when we deal with a small quantity of the power we have under consideration. It consists of two gold leaves hanging within a glass vessel attached to a metallic cup, and separated by shell-lac, which is a non-conductor, from the glass and surrounding matter. The consequence is, that one kind of electricity causes the separation of these leaves; they are now open. The arrangement I have before me serves as a beautiful conductor of electricity, but particularly of this kind. It is a similar arrangement to that of the ball which I now repel, and it serves me as a guide to judge of the condition of all the matters that are connected with it.

Before I go further, I ought to show you an important point with regard to this power, which is connected with matter, and by which we transfer it from place to place. I have now taken away a portion of electricity from this apparatus, and I meant to lend your attention to what takes place when we transfer electricity. You know one great and important property of electricity is the manner in which we can transfer it from place to place. First of all, there being a ball hung by silk, I have here electricity; and if I touch it thus, the leaves open in consequence of the electricity gone to the ball, and which I can take away from this ball and give to other bodies. I can share the electricity with this ball. On touching them, I find it has a part of it. I have now divided between these two the electricity which I took from the first ball. I can go beyond this, because I can take it all away from one and give it to the other. If I take a portion of electricity, and examine it by this instrument, first of all bringing the instrument to a proper condition for the purpose, you observe that it has a large quantity. In the first instance part remains, but I now take even that entirely away. I will show by and by that all this is plain enough; that we have a power which, by this experiment, is transferable from substance to substance, and from place to place. I have here both kinds of electricity, each causing these leaves to diverge, so that the effect is the same.

Now, remark, if I take this apparatus, and these two balls, which re so nearly alike as to be pretty equal in their action, and take electricity from each, either of these will affect that apparatus: but if these two once touch one another, being alike in all respects, there will be no electricity left; and though I had a double action a little while ago, there is now no action whatever in either of them. I have not taken off the electricity, but merely brought the two kinds of electricity together, and instantly, without reference to anything external, all is dispersed. There is not any effect in nature, and which comes under the law of nature, which is more wonderful than this—the entire annihilation of force from the combination of two active forces. We know no other case where we have the two powers excited, brought forth to a high degree, and which entirely disappear, and leave the substance as it was at first when the two are brought together. It is the special privilege, the super-excellence of these powers, that when they are thus combined the electricity entirely passes away. I do not want you to consider any theory for the explanation of this phenomenon, but look to the demonstration of the existence of this power, and its singular effects.

If we take an apparatus like this ball, give to it a large quantity of electricity, and to another ball we give the opposite kind, and then bring the two into contact for any time, nothing remains,—from which I can easily deduce in the way of reasoning, or words, that the two forces neutralize each other, but a philosopher must look beyond words; he wants to penetrate, if he can, into the condition of these powers, and to determine if possible what they are, and this is a great help to us in dealing with powers in the whole system of things, when we see that opposite or conflicting results are obtained. We have, it is true, heat and cold. Heat is the super-abundance, and cold is the deficiency; that is not the case here. Here are two powers starting from a normal point, and each in an intense degree, though some have doubted the normal condition of matter. That ball is stationary, it is normal, and any departure from it, one way or the other, is equally positive, and equally important.

Now that I have given you a general summary of the facts of last week, and thus established the independent existence of two powers, I must take you to one or two points that remain with regard to these powers, before we leave them for the consideration of voltaic electricity. It cannot but have struck you in the arrangement of the apparatus here, or the balls or the machine, that if we can communicate electricity to the apparatus, we at all events can keep it there, and to keep it there, it is very manifest the condition of the substance that does keep it must differ from those that communicate it. We communicate it from ball to ball, and ball to cup, and cup to leaf; but why does it run thus, and not through the glass? Because of a difference in the conducting power, that is to say, the capacity for conduction which different bodies possess, and which we express by the term, electrical conductional power.

A very few simple experiments will fix upon your minds what this conductional power is. Here is a machine which evolves power very abundantly. We get long sparks from it very easily, and collect and carry the electricity away by any little arrangement. Here are sparks; they are of a certain number, a certain force, and a certain kind. But suppose I touch this surface which gives sparks with a brass rod, shall I get sparks then? I get none. And why? The reason is plain; this brass rod must be an instrument that undoes the effect of that conductor. Suppose I take a glass rod, shall I get sparks then with the same facility as before? I do; then glass and brass must differ. If I take a wooden rod, shall I get sparks now? I get a few feeble ones, but not long ones; and if I make this wooden rod shorter, so as to diminish the conducting surface, I cannot get even the short ones. The rod has the power of drawing out short sparks, but if I make it longer I get sparks from which I must conclude that part of the power is running through another channel. When I use the glass rod little or no power passes, but it will pass by sparks at another part of the machine. If I use brass the power will pass by the rod, none by sparks; so that brass, and glass, and wood, are three bodies differing entirely from each other in their power of conduction. Here is an arrangement formed with special reference to the capacity of bodies to conduct power or not. Here is a piece of silk thread; it will take away no power because it is dry: I get the spark as well as ever, but on moistening the thread I get no sparks. This depends on the presence of the film of water which is contained in the silk. The water in the silk, although not the *silk* itself, is able to conduct the electricity. It is possible that if I wipe the silk as dry as I can, I may so far diminish the quantity of water in its fibres as to get a small spark. I will try the experiment, because it will give you an idea of the difference between these bodies, and how far water is a conducting substance.

The manner in which bodies differ from each other in this respect is most extraordinary. The thinnest wire I can find in the laboratory, or the thinnest piece of metal of any kind, would take away from that apparatus all its power of giving sparks. If this wire were lengthened a quarter of a mile, and the other end were connected with the earth, it would be a perfect conductor, and would take away all the electricity. A short piece of sealing-wax or shellac has no power of the kind. There are some bodies which almost entirely prevent any transfer of power. But some philosophers contend that there is no body that entirely prevents the passage, and none which conducts it without some resistance and retardation. But this I shall come to when speaking of voltaic electricity, in which currents are produced of a high degree of intensity.

Another point that I shall bring before you is the extraordinary *velocity of electricity*, when it does pass through bodies which are able to conduct it well. A piece of copper wire, which conducts it as well as almost any of the metals, is able to pass the electricity through it with a rapidity scarcely conceivable. But I must first let you understand what I mean by rapidity, as applied to the passage of the electric fluid. There are two points to be considered when speaking of rapidity, as regards electrical phenomena. One is, the rapidity of the spark. The spark occurs in a portion of time so minute as to be immeasurable. The rapidity is so extraordinary that you cannot ascertain that it takes any sensible portion of time to pass. What is the power that conducts here? A power in the ball. Here are two sparks, one here and another there. The electricity passes through the cylinder to the end of the wires, and the sparks occur at the same moment of time, the conductors being several feet apart. It is this velocity of power in the transmission of the spark that I wish to impress upon you. It takes place in so short a time that, although philosophers employ the term in practice, they can hardly form an idea of the velocity. The experiment I am about to make is one of a very simple nature, but it will bring before you the point I am now referring to—the excessive velocity of electricity in travelling through conducting bodies. Here being an apparatus by which we can collect electricity, I have the power of charging or discharging it. The moment we charge the jar, and I bring the wires round, we shall get the discharge. I have so arranged this conducting portion of wire, carrying it to the ceiling and other parts of the room, that it forms a length four times the height of the room, and the electricity must pass through the whole of this circuit, and make itself visible at the extremity, before the discharge can take place. Although you cannot measure the rate of its velocity you will be able to make a common observation respecting it. Now this jar is charged, and when I discharge it the power will pass out at the extremity. The two sparks from the short and long conducting wires happen precisely at the same moment, notwithstanding the electricity has gone 80 feet in each wire, making 160 feet, before it has passed all round them and reached the jar. The two explosions happen at the same moment. It is remarkable how those who are habituated to it can detect some interval between two sounds. There is a kind of burr, or rattle. Those who are musical are aware of this, and know the annoyance when two sounds do not occur precisely at the same moment. But no attention of man can make him perceive the slightest difference in these sounds of the electric discharge; and it is impossible to say there are not two explosions, but only one small click takes place; they are perfectly simultaneous. I only show you this on a rough form of apparatus, but the wires have been extended to miles, and the discharge whether near or distant has been equally simultaneous. Professor Wheatstone has come to this conclusion, that through a wire of this sort, the electricity passes with a velocity greater than that of light. In order to give an idea of this, I may state that 192,000 miles in a second is the velocity of light, very well deduced from astronomical phenomena, but the electricity which passes through this wire has a velocity as great as that, and even greater, for it will travel 288,000 miles in a second. Through a wire of that diameter the electric power would go round the earth about twelve times in a second, or six times while a man takes a single step, and it is with this velocity that it passes through the wires used for making signals by the electric telegraph. If I had time I should be glad to instruct as well as please you with a comparative illustration of various velocities. A man passes four feet in a second; a race horse, 40; a hare, 88; the strongest winds, 82 feet; sound, 1038; a twenty-four pounder from a cannon's mouth, 1300; but here we get 288,000 *miles* in the same period of time.

We have here a power which we can not merely excite separately from matter, but give it strength, and cause it to pass through bodies at a most extraordinary rate, and detect all its varied phenomena in all the forms of apparatus before us. We can take account of the smallest portion; we can estimate the amount and strength of a certain quantity, and dispose of it here and there with an exactitude which is wonderful, considering the subtlety of the power, and the means it has of escaping. Such is the beauty of the manifestations that come before us when we deal with the great laws of nature, and observe phenomena which never fail, because the Creator governs by fixed laws. He has permitted us to examine them and trace them, and admire their effects, and make provision for their application to purposes useful to man.

I must take you to one or two other points connected with electricity. The way in which I have, as yet, excited electricity, to bring it to your attention, has been by the friction of bodies one against another; but there is a strange way of exciting it, which I will endeavour to express by the term *induction*. This experiment will bring it before you as well as any other. I will put up another apparatus for the purpose of making it more visible to all my auditory; still the principle is the same. Here is a little arrangement by which a glass thread is suspended; at the end is a paper stirrup, and then there is a portion of matter, partly conducting and partly not. This rod which I hold in my hand is made of shell-lac, and does not conduct. A piece of gold-paper at this end does conduct. Shell-lac and glass do not conduct; I might give electricity to this gilt paper, or that portion, and it will there be preserved. Although the draught of air disturbs it I shall be able to show that among the effects produced are those of induction. I now speak of attraction. I am drawing this after me. I have bounded its course by two small pins. Now I have touched it a little; look at the repulsion which is produced. I have before told you of the strong repulsion of that body by the electricity that remains in the ball. If I discharge this ball, it will be not quite indifferent, but nearly so; it will rather attract it. If I take more electricity I shall now repel it, because it is of the same kind as before. The conductor is now charged, and if I touch it with the ball, I shall get electricity which would repel the body, but I bring it near, without touching it, and take it away, and now you will find it will strongly attract it; and what is more, it attracts it, not because it is neutral, but electric. If I disturb this state I make it indifferent. The electricity which this ball gathers near the conductor so strongly attracts the rod, that it follows it about so fast, that from the ball being heavy I can hardly get it out of the way. What I want to convey to your minds is this, that the electricity I procure from the neighbourhood of this conductor is quite of a contrary kind to that obtained by actually touching it. We try to express this phenomenon by words, *i. e.* that there is a power all around the apparatus of inducing an opposite electric state in surrounding bodies. We can charge the ball, through this electricity which has the power of causing all surrounding bodies to be electrified. In consequence of that we have a state which we call induction, and which is the reverse of conduction.

I will first electrify it by contact, which I have now done. I can gather electricity from my hand just as easily as from that little apparatus before us, or from the wall, or anywhere else, through the influence of this body. This is exactly the contrary kind of electricity from what we had before. I can get electricity at the distance I now show you, from the wall of the room, and which is made visible by the use of the electroscope. All of you, so far as you are exposed to the general influence of this machine, are in a contrary state from what the machine is. It is singular to observe the differences that are presented. I have been considering, in the first instance, what we mean by electricity by induction. We get the idea that the body can communicate its own electricity only to a body touching it;—while we get the contrary electricity from a body that is placed near, but not touched. This is the meaning of the expression of electricity by induction. It runs through an immense variety of phenomena, but there are two or three which are exceedingly important. If we look at this conducting body as being that through which the electricity can pass—air, being a non-conductor, I keep the ball at a certain distance from the conducting substance. Then it comes to this, if that body be electrified, as it is at present, it endeavours to induce in all surrounding bodies a contrary state. If it be electrified, I shall be able to take a portion of it by this vessel, and carry it off the instrument. Formerly, to my surprise, and probably to yours now, there is no electricity in the inside of it; but if I go to the outside, there is a large quantity. The electricity being on the outside of the conductor, we do not mind whether it is hollow or solid. All the electricity is brought to the surface, causing through the air a contrary effect in all other bodies surrounding it. Take a portion of wire gauze. I have no electricity on the inside of it; I come to the outside, and I have no doubt plenty, as you will perceive. But if I go to the inside, by employing this insulated metallic ball, and being careful not to touch the outside, I do not find any there. If I could turn this vessel inside out, the electricity would also be turned inside out, and not be found in the interior. I have here a vessel formed of black net, which by a little contrivance I can easily turn inside out, to show the varied effects of induction. Although the meshes be so large as to allow a rod to pass through them the tenth of an inch in diameter, still the electricity is entirely on the outside. We will first see whether there is electricity on the outside. There is plenty; but none inside. Observe the part of the plate which is outside is covered with white paper, to mark it. I have turned it inside out: and I shall now find that if I touch it on the inside, there is no electricity, although just now at the outside it had a large quantity: but coming to the outside (which was the inside) I shall have an abundance.

I take the simplest experiments I can bring before you to fix these points on your mind. I must not stay further to develope it, although I could keep you here for hours together to observe the extraordinary results of this power. In that Leyden jar there is simply an arrangement by induction that gives an accumulation of electricity. I will make an arrangement of this sort and put it in contact with the machine; the balls conduct it to this part of the plate, then comes air, and then a plate; then I have between the two surfaces induction: and the more they are opposed the greater the induction between. This will now pass from the battery to the balls. You will see the colour of the spark. The moment the electricity rises to a certain intensity, it darts across the air, and is discharged; but if we take a substance, such as glass, which is not so permeable to electricity as the air, the barrier to electricity is greater than that formed by the air, and we shall have that beautiful apparatus, the Leyden jar, which now allows of its accumulation. In this case electricity cannot pass through the air, and it goes on accumulating in the metallic plates. It travels, not through the glass, but round the edge, and there is not a large spark. If I make the apparatus less, I get a small portion; but if I make the barrier greater, the spark is very large. If I take a plate of glass with two plates of metal, one on each side, it will tend to produce induction, which I now have here in the highest degree. If I take this jar, lined with tin-foil instead of various plates, I have a powerful apparatus for accumulating electricity, and this condition we could not procure by induction.

Now, I must pass for a little while to the consideration of this power, as we have obtained it, and are able to accumulate it, and occupy the rest of the hour with a consideration of the appearance and condition of the power, or force, when it is making itself manifest in what I will call for the time a separate condition. Now it is passing through the air as a discharged apparatus in the form of sparks. I may pass by the beauty, appearance, and velocity of these sparks with the remarks which I have already made. It is wonderful to see a power passing through the air, or gas, or liquids, separated from it for the moment, and we are unable to say in what way the transfer takes place. By a greater accumulation in the power, it is passed across the intervening space, whatever it may be. Where the spark appears it is luminous, but we think the light is a mere contingent accident from the percussion of the air. We have no philosophical means of deciding the point, but we do not think that electricity is itself luminous, but merely produces this phenomenon by the intensity of action at the time. Just as we get chemical force, and according to the intensity of its action, we get light and heat; but we do not say that chemical force is luminous because we get light and heat; we say they are the effects of force. But there are other effects to which I must call your attention.

When this force passes through bodies it has an extraordinary power of affecting them in certain ways; and I will show you an experiment or two of this kind. For instance, here is a piece of gold leaf; and if I make a little arrangement upon the table so as to pass the discharge from these two jars through the gold leaf, you will observe the effect of which I speak. The effect will be the accumulation of what power these two jars can contain on a small surface. This is a little battery, a little accumulating apparatus, which I can put in connexion with the machine, and then it is charged with electricity. We can accumulate it at pleasure here. Now I am not looking at this moment for a great exhibition of power, but merely the principle. By this arrangement I hope to send the discharge from the jars through the gold leaf, and we shall first make it appear in the contrary way. Here is a conductor that tells me when the jars are charged to a sufficient degree. Having performed the experiment, look at the gold leaf; you observe, that by the proper arrangement of the conducting matter we were able to send it through the leaf, and it has destroyed or dispersed it where the discharge took place, and the gold remains on other parts. What I have done with gold leaf will take place with other metals when the charge is raised to a higher degree of power. I have here a larger power to show the combustion of metals. When I gave you gold leaf the quantity of matter was extremely small; it was merely a thin film through which the electricity passed, and the discharge took place. Here is a small piece of wire; and I shall be able, by my arrangement, to send the discharge through it; here is the point where I shall make the connexion so as to get the discharge of power when that power is made by the large machine. I wish you to remember that these are effects, not of power in a quiescent condition, but manifested only when it is passing or travelling from place to place. You see how slowly the indicator rises, showing the gradual accumulation of the thunder and lightning, for such it is. I am going to burn the wire as the discharge goes through it; and there is here a large portion of metal compared with that which was used in the former experiment. In this experiment, now performed, you saw the beautiful light that took place, and the entire destruction of the wire, which is a secondary effect. But let me call your attention to a compound conductor of this sort, viz. a conductor where I have taken gold and silken thread which is used for ornamental purposes, and got the gold entwining the thread, and where we shall have the compound effects of electricity both upon the metal and the non-conducting thread. Remember the distinction I have made between metals and other substances as conductors and non-conductors. In this case we see what takes place when both are at once subjected to the electricity. Here is the thread; a great quantity of metallic oxide is thrown into the air, or is thrown on the paper, but here is the silk untouched by that heat which has completely burnt and destroyed the metal. Think of the effect that takes place on the metals while the silk is untouched, and entirely escapes the action of the electricity which must have been diffused everywhere around it. Contrast that silk, and the effect which took place under other circumstances, when non-conducting matter is brought into the current of electricity. Here you have part of a mulberry tree that was struck at Norwood. Here is a portion of oak struck near Coventry. Here is a portion of bark struck by lightning in Norfolk. You see the manner in which destruction has taken place, and though by the experiments now performed you have seen no bad effects, yet from these specimens you have a tearing up, a ripping of the wood, occasioned by one discharge of electricity passing through them, that electricity being evolved by natural causes.

I must tell you—but we may perhaps have an opportunity of referring to it more hereafter—that in this kind of ignition by a current passing through the metal, we have reason to believe the fusion and dispersion of the substance takes place, not so much by heat, though heat no doubt is produced, as by a certain separating action of the electric force itself. The facts are only now coming forth in a distinct way that show this, and that metals can be fused at a low temperature by the electricity going through them. We have heard of a watch being melted in the pocket, and gold coin being fused in a purse, and yet the silk escaping. I am satisfied from what I have read lately that there is great truth in the fact that electricity can so pass as to set metals in a fluid state without raising the temperature proportionate to the degree of heat required for fusion. In all these cases these bodies can fuse at a low temperature when electricity is existing in them in a certain state, and they can be resolved into a fluid form much more freely than if there had been no electricity. There is, however, a power that becomes more manifest in experiments of this kind, and that is voltaic power.

There are one or two curious conditions about this power of conduction, and which are made evident by the arrangement that man has made to preserve himself from injury during a thunder-storm. Lightning has done harm in towns and country, and the object has been to construct instruments that could carry off this power, and prevent it from doing injury. The apparatus I have here will give you an idea of the manner in which these conductors are intended to act. I have here laid down a thick gold leaf; there are some prolongations, some contiguous parts, and I am so placing it as to get a discharge of electricity through it. I do not want much power here. Look at the arrangement beforehand, and observe the effect of the discharge. The discharge has been strong, and what is the condition? Only those portions of metal in the line of the discharge are affected, and those portions of metal situated to the right and left of the course of the discharge are untouched.

This experiment answers the objection of parties who are afraid to make lightning-conductors touch a building. It does not affect what they fear, the hold-fasts, or loose pieces of metal, for the electricity does not go along them, if they should not be in its course. The electric fluid will always take the shortest course. You see the way in which the electricity has obeyed the power which should conduct it off, and you may feel confidence and assurance in this, that a lightning-conductor will not send the electricity to other parts, if it is itself perfect. But, then, on the other hand—and here is the danger of half knowledge—we find many, perhaps practical men too, who, not knowing the full extent of electric power,—(not that I wish to say we know more than others),—but not having watched it entirely, are not fully aware of all the conditions under which the facts are brought out. One of the strongest anomalies that you can possibly conceive is this, that there is no part of a lightning conductor, when a shock takes place, that is not prepared to give lateral sparks to other bodies. I must show this. Here is the end of a wire, which is connected with the gas and water-pipes that belong to this Institution, and that is my lightning-conductor. I may have electricity falling on a number of bodies, but here is my lightning falling on the conductor, and going away all round the circuit of the tubes to the earth. This conductor is more perfect than that, because the quantity here is enormous. There I have a large battery, and a thin film of gold-leaf that will be preserved, being placed laterally. Here I have a wire connected with the gas-pipes of this city, and yet this conductor is prepared to give out sparks at any point throughout its course; so that if I take the wire in my hand, I find a spark here, and such a spark as will light bodies. If I take this vessel of gas, which has a metallic point, it does not matter to what part of the long wire I go, we shall still find that there is electricity capable of igniting gas all round the room. It so happens that a piece of this metal lies by accident against the gas-pipe, and even that is liable to give me a spark which will light the gas. What does this lead to? It points out how needful it is to be careful when we are applying to practice the principles which we are now considering. There are many buildings without conductors covered with metallic roofs, and there is nothing more important, than to consider whether these small sparks may not do harm to things underneath them. Again and again have I had occasion to speak of this point in reference to the metallic roofs of powder-mills, or magazines of powder. If we had a roof of copper we should connect it with water, but if it were a powder-mill, and there was any dust on the rafters, I should take the utmost possible care to avoid sparks, because these sparks by induction might set fire to the powder, and do serious harm. I cannot leave you better impressed with the consideration of induction, and its opposite condition, than by asking you to mark the manner in which the thinnest film is capable of conducting away this extraordinary power.

A COURSE OF

LECTURES ON DENTAL PHYSIOLOGY AND SURGERY,

Delivered at the Middlesex Hospital School,

By John Tomes, Esq.

Surgeon-Dentist to the Hospital.

Lecture VIII.—*continued.*

Irregularity in the position of the whole of the front teeth—Irregularity in the central incisors, in the lateral incisors, and in the canine teeth—Irregularity in the bicuspides and molares—Irregularity in the position of the wisdom teeth, and the consequent diseases.

There is a fourth form of complete irregularity of the front teeth: it is this. The alveolar lines of the jaws are developed at such an angle with each other, that on closing the mouth the molar teeth alone come in contact, the front teeth being separated by a considerable interval. The models on the table present a well-marked case of this peculiar formation. If the defect in formation be discovered early in life, some attempt at restoration should be made by continued pressure under the chin; but if the deformity is found in the adult, the less you interfere the better, as your patient will have overcome, by habit, the inconveniences arising from malformation.

Partial irregularity of the front teeth.

At present we have treated of irregularity affecting the whole of the front teeth; we shall now consider malposition when occurring to a part of the front teeth, and in doing so we will commence with the central incisors.

The central incisors, one or both, may project forward or retreat backward in an unnatural degree. Of these deformities the latter is the most common, and the one which we are the most frequently called upon to remedy (fig. 20). The cause which usually produces these misplacements is the prolonged presence of the temporary incisors,

Fig. 20.

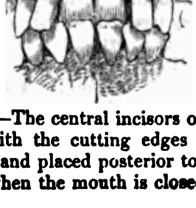


Fig. 20.—The central incisors of the upper jaw, with the cutting edges directed inwards, and placed posterior to the under teeth when the mouth is closed.

which oblige the new tooth to take either a posterior or anterior position, while the milk tooth is forced outwards or backwards, the proper position of the new tooth being between the two positions.

The central incisors may, however, occupy the proper line, but yet be irregular. The teeth may be twisted on their axes, either towards or from the mesial line; that is, the mesial edge may be turned inwards while the internal side projects forward in such a manner that the cutting edges of the two teeth form an angle with each other, the angle pointing towards the mouth; or the position may be reversed, and the angle point outwards.

This form of irregularity is, like the last, produced by the relative position of the temporary and permanent teeth during the development of the latter. Thus the mesial angle of the cutting edge is placed anterior to the fang of the central, while the external angle is placed behind the fang of the lateral temporary tooth; or the position may be reversed, the external angle may be anterior to the fang of the temporary lateral. In each case, unless the temporary teeth are shed at an early period, the permanent tooth will, on coming through, be at an angle with the proper dental curve (fig. 21.)

Fig. 21.

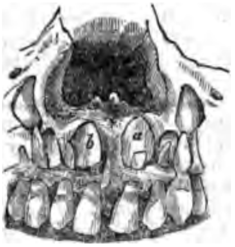


Fig. 21.—The temporary and permanent teeth previous to the development of the roots of the latter.

a. The left permanent central incisor in its normal position as regards the roots of the temporary, central, and lateral incisors; that is, placed posterior to them.

b. The right central incisors, with its mesial edge placed anterior to the root of the preceding temporary central, while the external angle and side is posterior to the root of the temporary lateral incisor. With this position, the permanent tooth must, unless the roots of the temporary teeth are quickly absorbed, descend with the mesial edge everted.

The presence of the temporary lateral, when the central is shed, may also lead to malposition of the permanent central, supposing the central be a large tooth, and the space destined for it be too small.

The lateral incisors are subject to the same forms of irregularity as those which occur to the central teeth, and therefore do not require a separate description. It may be observed that the more common malposition is the direction inwards, and consequent closure behind the teeth of the under jaw on shutting the mouth (fig. 22).

Fig. 22.

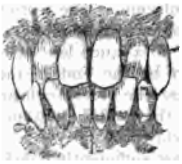


Fig. 22.—The upper lateral incisors with the cutting edges directed inwards, and closing behind to the corresponding teeth of the lower jaw.

The causes producing irregularity of the lateral are similar to those effecting malposition in the central teeth, namely, want of space for them to take the proper position; the prolonged presence of the temporary teeth, irregularity of position as regards the position of the fangs of the temporary teeth during development, or irregularity in the teeth of the under jaw, forcing the upper teeth on closing the mouth.

The canine teeth of the upper jaw may be turned sideways, may stand anterior to the adjoining teeth, which is the most common form of irregularity, or may incline inwards, which is the least common of the irregularities of position occurring to these teeth.

The circumstance of the late protrusion of the canine tooth in a small jaw is a constant source of irregularity; the incisors anteriorly, and the bicuspides and the first molar teeth, having taken their places posteriorly, insufficient space is left for the canines, and as they occupy when developing a rather anterior position in the jaw, they most commonly are evolved anterior to the neighbouring teeth.

Treatment.—Whichever of the anterior teeth be the subject of malposition the same modes of treatment for the reduction of the irregularity are applicable. If, then, the front teeth are found on examining the gums to be out of position, the cause of the irregularity should be sought.

If there is a want of space, one or more of the temporary teeth should be removed, and the patient should be directed to press the new tooth frequently during the day towards the proper situation. The required position may in some cases, where the irregularity is slight, be given to the new tooth by the frequent use of a piece of wood, shaped something like the handle of a spoon. The bent part should be passed behind the inward tooth, and the mouth partially closed, when the projecting portion of the instrument should be pressed downwards towards the chin. The under teeth will then form the fulcrum, and the upper tooth will be moved outwards. If the under teeth stand too much inwards the action of the lever may be reversed, and the upper teeth made the fulcrum. The teeth forming the fulcrum of the lever may also be moved, though probably to a much less extent than those acted upon by the end of the lever, as in the one case the pressure bears upon the concavity of the dental arch, and in the other upon the convexity.

If the teeth are sufficiently developed in length to pass behind the under teeth when the mouth is shut, these means will not be sufficient to restore them to a proper position, because the under teeth by their anterior position prevent them from coming forward. Our first step in the treatment must therefore be to remove the influence of the opposing teeth by placing caps upon the molars, which will so heighten them that on closing the mouth the front teeth do not come in contact.

Having accomplished this point, and ascertained that there is sufficient space in the proper situation, steady pressure must be made upon the irregular teeth. If one tooth only be displaced it may be sufficient to pass an elastic ligature behind or before (as the case may require) the irregular tooth, and then round the adjoining teeth, in such a manner that the ligature shall exercise a tractile force upon the tooth in the direction in which it should move. The best material for elastic ligatures is vulcanised caoutchouc.

If, however, the irregular teeth are well grown, the treatment by elastic ligature may occupy an inconvenient time, and it will be better at once to construct a plate fitting the palate, and thus gain a fixed point. If the teeth are in-placed, we may force them outwards by interposing pieces of compressed wood between the plate and the irregular tooth, or if the irregular tooth stand external to the proper line, an elastic ligature, or short bit of gold spiral spring, may be connected to the plate and to the tooth: the spring, by its action, will drag the tooth into its place. In most cases the tooth will move more quickly than the gum will absorb; it is necessary to bear this in mind, that sufficient space may be left for puckered gum.

The annexed figure will give some idea of the construction of a plate for the above purpose.

Fig. 23.

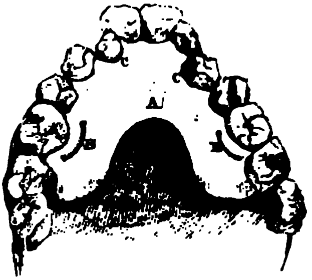


Fig. 23.—A plate for a fixed point from which to reduce to order irregular teeth, represented in situ.

A. Plate of ivory, fitted accurately to the surface of the palate and to the necks of the teeth.

B B. Ligatures passing through the plate and round the necks of the teeth, so as to prevent the slightest movement in the plate when subject to pressure.

C C. The irregular teeth, which are to be forced into a more anterior position, by placing between the labial surfaces and the plate compressed wood, or vulcanised caoutchouc.

A very simple and effective method of moving an upper tooth or teeth that are placed internal to the proper line consists in making an artificial elongation of the under teeth, the anterior surface of which inclining inward must pass, on closing the mouth, behind, and press outwards the in-placed teeth, while the base is fitted and firmly fixed to the under teeth. This instrument, which may be made of gold or of ivory, must be worn continuously by the patient till the irregular teeth have assumed the natural position.

If a tooth is twisted upon its axis, our treatment must be modified; pressure must then be made upon the side of the tooth which is most misplaced. But before proceeding to use mechanical means, observe whether the evil is kept up by the opposing teeth; and, on examination, you will frequently find that the edge, when the mouth is closed, rests between the two opposing teeth, one angle of the twisted tooth lying in front, and the other behind its opponents. In this case the molar teeth must be capped so as to remove the reciprocal action of the antagonist teeth. To one of the caps a piece of elastic gold wire may be firmly united; the free end must then be brought in front of the twisted tooth, upon the receding side of which it must be made to act. The better method of connecting the spring to the tooth is to fit with great accuracy a band of metal round the crown, to which band a small loop may be soldered; the end of the spring may then be drawn down and secured, by ligature to the loop. Or, instead of using the spring external to the teeth, we may attach a spiral gold spring to a fixed ivory palate, and to the tooth, through the medium of a band and loop, as in the former case, and thus turn the tooth on its axis till it assumes the proper line. I believe in a few instances the central or lateral incisors have been, by the use of the forceps, at once twisted into their proper position, and then secured by ligature to the adjoining teeth. I cannot recommend the practice, as it will, in many cases, be attended with the loss of the tooth.

It has been shewn that pressure regularly applied upon a tooth in any other direction than in a line with its axis will gradually move the tooth in the direction of the pressure, whatever be the age of the patient: it follows, therefore, that dental irregularity may be reduced at any period of life. Whether it is advisable at all ages to reduce by mechanical means out-standing teeth is a question we must now consider.

If the patient be young, and the irregularity is not kept up by the closure of the teeth, it will be sufficient to remove the cause of the malposition by the extraction of the obstructing temporary teeth; or, if it be necessary, a permanent tooth. The teeth will then, during the general growth of the body, arrange themselves into the proper line. There is a strong tendency in the teeth to assume their proper relative position, and if the obstructive cause be removed sufficiently early, they will, though at first considerably out of place, gain of themselves the desirable position.

If, however, the irregularity is kept up by the closure of the antagonist teeth, the sooner after the full evolution of the tooth mechanical means are resorted to the better.

In the adult, if teeth are misplaced from want of room for a regular arrangement, one of the permanent teeth must be sacrificed; and it may, if the maxilla is very small, be necessary to remove a tooth from each side of the jaw. The tooth selected should be either the second bicuspid or the first molar; the reason for taking one or other of these teeth in preference to a more anterior tooth will be shown by a statistical table illustrative of the relative value in durability of each tooth. After making space by the removal of a tooth, the anterior teeth must be forced backwards by pressing between them small pieces of compressed wood, or Indian-rubber: the former by swelling, the latter by its elasticity, will force the teeth towards the vacated place. Having thus gained sufficient space, the irregular tooth must be brought into its place by the means I have before described; for we must recollect that in the adult the disposition in the teeth to assume the proper line no longer exists.

It is necessary to bear in mind, that although a tooth may be moved either from side to side, or backwards and forwards, yet that we have no power of lengthening a tooth. If, therefore, an irregular tooth be short, and its edge placed upon a different plane to the cutting edges of the adjoining teeth, and at the same time stands considerably out of line, it may be necessary to remove the tooth, even though it be a front one. For if you bring a tooth into the line, and when there it is shorter than its neighbours, it will still be unsightly. The canine tooth of the upper jaw is especially liable to come through the gum at a much higher level than the adjoining teeth, and if space be not afforded it to take its position the development of the tooth will be completed in the irregular position. The crown will be the usual size, but the fang will be very short. When these cases are met with the tooth should be extracted, for it is not only irregular in position but in conformation, the fang being unnaturally short. Before sacrificing the tooth we should satisfy ourselves that its development is completed, for if the fang is not fully formed the tooth may be brought into its place, and the development of the fang will proceed. You will see how desirable it is to preserve the front teeth, and especially the canine, when we come to the statistical tables of the relative durability of the teeth.

A tooth that has been moved by pressure feels to the patient, and, indeed, is during the process, and for a short time afterwards, slightly loose, and exceedingly sore. In the young subject and in the adult the tooth on being left at rest soon loses this tenderness and fastens; not so, however, in the decline of life. On the contrary, pressure upon a tooth induces irritation in the gum and alveolus; the latter becomes absorbed, and the tooth when left at rest seldom becomes as firmly placed as before the operation, neither is the absorbed alveolus reproduced.

In order to prevent any injurious motion in a tooth, after being by mechanical means brought into place, a silk ligature should be passed round the neck of this and the adjoining teeth, and securely tied. The ligature, if efficiently applied, will not only prevent motion, but will also counteract any tendency in the tooth to recede to its former position.

The bicuspid teeth are sometimes, from want of space, misplaced; the crown may project inwards towards the tongue, or outwards towards the cheek. If the degree of irregularity be slight, the teeth being but little seen, may be allowed to remain; if, however, any inconvenience be felt, the irregular tooth should be extracted. Where there is a choice the second should be removed in preference to the first bicuspid.

The first and second molars are so seldom the subjects of irregularity in position that we may pass them over.

At present I have been speaking more especially of malposition of teeth of the upper jaw; what has been said of abnormal position occurring of the one may, however, be applied to the other jaw. I need not, therefore, occupy our time with a description of the dental irregularities occurring in the lower jaw. The treatment will be similar in principle to that adopted for the upper teeth, though the apparatus must, of course, be modified to suit the form of the jaw. Thus, when we require a fixed point from which to act upon a lower tooth, it must be external to the teeth. The under teeth seldom require mechanical means to reduce them to regularity. In the first place they are in the majority of individuals but little seen; slight irregularity is therefore but little regarded. Then, again, the malformation is generally the result of want of space, and passes away on the removal of the crowding tooth. The tooth selected for removal should, in the majority of cases, be the first molar, from its great liability to early decay.

In describing to you the various forms of dental irregularity, and the treatment to be adopted, I have endeavoured to lay before you the general principles, and especially as regards the treatment, in which I have described the plans usually adopted, in preference to giving an account of the construction of the instrument to be used in each case. I have done so, first, because we have not sufficient time allotted to us to go minutely into every part of the subject of dental surgery, and, secondly, because if I did, such information would be of but little value to those destined to practise exclusively medicine or surgery.

Irregularity in the position of the wisdom teeth demands our earnest attention, not so much on account of the disfigurement it may occasion, as on the serious and distressing disorders that are sometimes consequent upon misplacement.

The wisdom teeth of the upper jaw, when taking a false direction, give rise to great inconvenience, but the more distressing symptoms are generally connected with malposition in the inferior maxilla. I shall therefore direct your attention more especially to the latter, as in those cases we shall find the disorders similar, but more severe and better marked than when arising from the wisdom teeth of the upper jaw.

The third molar may be malplaced in five different directions. First, it may grow obliquely forward with the masticating surface directed against the posterior surface of the second molar (Fig. 24). Second, the crown may be directed outwards towards the cheek, and may even be imbedded in the cheek. Third, it may take an inward direction towards the tongue (Fig. 25). Fourth, the tooth may be directed upwards in the coronoid process, either completely or partially within the bone (Fig. 26). Fifth, it may occupy its natural position in the jaw, but be held down by indurated gum.

FIG. 24.

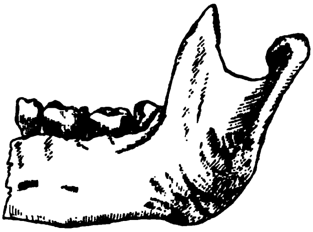


Fig. 24.—The wisdom tooth of the lower jaw with the crown presenting forward, and producing pressure upon the posterior surface of the second molar.

FIG. 25.

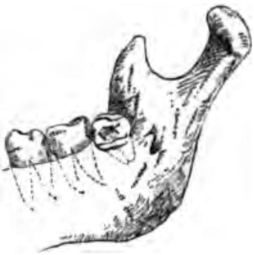


Fig. 25.—The wisdom tooth, with the masticating surface directed towards the tongue.

FIG. 26.

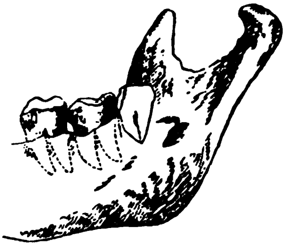


Fig. 26.—The wisdom tooth developed in the coronoid process of the lower jaw.

If we recal to our minds the progressive stages of the development of the three molars we shall be able to assign the causes of these various forms of irregularity. You will remember that, immediately after the development of the sac for the wisdom tooth, it ascends into the coronoid process, that the ramus of the jaw increases in length, and that when sufficient space is formed the sac descends and forms a line with the more anterior teeth; but if from any cause the jaw ceases to elongate when the sac occupies the coronoid process, the tooth will be developed in that situation. On the other hand, if the maxillary growth stops when the sac has descended to the angle only, the tooth will be directed forwards. Again, if growth should cease when the tooth has descended and fallen into the line, but before sufficient space has been formed for its evolution in the vertical direction, the tooth will be directed outwards or inwards, taking that direction in which the least resistance is offered. It may happen, however, that although there is sufficient space in the alveolar line, yet the wisdom tooth does not appear through the gum, arising, as far as we can tell, from the presence of a thickened and indurated gum, which offers effectual resistance to the eruption of the tooth.

Cases illustrative of the evils that occasionally arise from the various forms of malposition of the wise teeth not uncommonly present themselves to our notice. I shall, however, place before you several cases related by Velpeau; first, because they are very instructive in themselves, and secondly, because they come with the weight of his authority.

I should also, but for the want of time, cite some cases from Dr. Ashburner, to whom the profession is deeply indebted for bringing before their notice the various evils that may and sometimes do arise from malposition of the wisdom teeth.

Case I.—"A lady, at the age of 22, began to feel a dull pain at the angle of the lower jaw on the left side of the face; the pain soon extended to the adjoining teeth, but was distinct from toothache. As the pain continued to increase in intensity for several months it was thought to be a case of rheumatism, and as such was treated, but without good effect; then blisters, and a seton at the back of the neck, kept open for a month: opiates were given, but all to no purpose. She went and resided at a watering-place for some time, but came back to Paris nothing benefitted. At this time the teeth were all good in appearance, the gums healthy, and nothing denoting the eruption of a wise tooth. However, upon making a section of the gum over the wise tooth, a probe passed down led to the discovery that the wise tooth was arrested in its progress by the direction it had taken directly forwards, its crown coming in contact with the posterior surface of the second molar. The second molar was extracted, and the patient immediately released from her suffering."

Case II.—"A lady, 29 years of age, sought advice on a painful tumor in the cheek: it had existed for several months. On examination it was found to arise from the wise tooth projecting horizontally outwards, and lodged in the parietes of the cheek. So soon as the mouth could be opened sufficiently wide the tooth was extracted, and the patient soon recovered."

Case III.—"A gentleman, of 45 years of age, had suffered from an ulcer on the side of the tongue, near its base. This ulcer he conceived to be syphilitic, and so was salivated as a means of cure. The salivation, however, made it much worse. After a while, on application to Velpeau, it was found that the wise tooth on that side was directed inwards, and projecting into the mouth had occasioned the ulcer on the tongue: the tooth was extracted, and in a few days the ulcer healed."

Case IV.—Patient F. Boulanger applied to Velpeau in 1825. The right cheek greatly swollen, the tumefaction extending from eyelids to the clavicle; several cicatrices, resulting from old abscesses, mark the skin in this neighbourhood. For the last twenty months the patient has not been able to open his mouth, and has therefore subsisted on broths. Three inches down the neck from the angle of the jaw there is a fistulous opening, through which much pus is discharged; lower down the neck there is another fistulous opening. On passing a probe into the first of these openings it penetrated obliquely backwards about three inches, and then was stopped by a hard body, which proved to be the dens sapientis. The patient's health had suffered much from frequent attacks of colic and diarrhœa, indigestion, &c. The mouth was gradually forced open by the introduction of bits of cork and wood between the teeth; the process was tedious but successful. The tooth was extracted, and in five or six days a sequestrum was discharged which seemed to belong to the coronoid process; it bore the mark of the crown of the tooth, and thus indicated the obstacle which had opposed the development of the tooth. The second molar was now extracted: eight days afterwards a second piece of bone was removed; and from this time the tumefaction of the neck and face disappeared so rapidly that at the end of twenty days the face had resumed its natural appearance.

Case V.—A gentleman of 50 years of age had, during the last two years, suffered excessive torture. The right side of the face was greatly swollen and disfigured by sores from old abscesses; the neck, also, was swollen down to the clavicle, and marked in a similar manner; the mouth remained half open, and was distorted, the lower teeth not corresponding in range with the upper. The general health of the patient had been considerably affected by his sufferings. For the last four months he laboured under constant diarrhœa; fœtid saliva, mixed with pus, flowed constantly from his mouth. He was feeble, emaciated, and unable to walk without the support of two friends.

A mass of fungous flesh, which occupied the whole of the mouth on the diseased side, was freely divided, and, after a long examination, a wise tooth was found in the base of the coronoid process. The tooth and the whole of the process were removed, as were also several portions of the maxillary bone, with loose teeth. Within a fortnight all the bad symptoms had disappeared, and nothing remained but the deviation of the mouth, which was finally overcome by means of a bandage.

Case VI.—Dr. Fricard, when a student, was attacked, in the summer of 1821, with pain in the throat, and in the following November with severe inflammation of the right tonsil. This condition was partly subdued by antiphlogistic measures; but the pain soon returned, and continued, in spite of every means, up to the year 1823. The teeth and gums appeared to be perfectly healthy, and the surgeon was about to extirpate the tonsil, when it was accidentally discovered that the wise tooth on the affected side was not through. The gum was now freely divided, but the portions of the divided gum inflamed, and had to be removed with the knife and caustic. The tooth was thus completely freed, and the obstinate inflammation of the tonsil soon disappeared.

Case VII. — M. Esquirol informed Velpeau that he had a case of mental derangement where the patient was restored to reason by a crucial incision division of the gum, which liberated the wise tooth.

These cases were related by M. Velpeau in a clinical lecture which was reported in the Medical and Surgical Journal in 1841.

We should at first sight scarcely expect that consequences so serious would arise from the development of the wisdom teeth, when occupying an abnormal position; neither do they necessarily occur when the teeth occupy either of the situations I have described. Before serious and painful results can arise there must be a concurrence of many circumstances. The patient must be of strumous constitution or predisposed to inflammatory action, or the nervous system must be peculiarly susceptible of excitement; in which case epileptic fits may supervene upon any interruption to the advance of the wisdom teeth. That epilepsy does arise in some cases from this cause is proved by its appearing when the teeth are passing towards the surface, and disappearing when passage is given to the teeth by removing the obstructing cause. I have within a few weeks of this time, known of three cases which have occurred in the patients of medical friends, where fits have commenced when wisdom teeth were presenting, and which were completely removed by free incision through the indurated gum over the teeth. As a precautionary measure lint should be placed in the incisions to prevent the union of the divided surfaces, otherwise the symptoms may recur.

I have during the last two years seen four cases in which the teeth presented with the crown forward, and produced great pain about the angle of the jaw, extending to the neck and shoulder or to the side of the head. In each case the wisdom teeth were removed. The operations were attended with considerable pain, but it is better that pain should be suffered than that the second molar should be lost in order to give space for a tooth which, when fully developed, will be useless in mastication.

The wisdom teeth when malplaced are wholly useless in mastication; we need not, therefore, hesitate to remove them whenever they give inconvenience. These teeth, although in their proper situation in the jaw, yet may, from their closeness to the ascending ramus, give great inconvenience, not from want of space for the tooth itself, but from the mucous membrane of the ramus lying over the posterior surface of the teeth, and being consequently subject to injury from the upper teeth whenever the mouth is closed. Inflammation is thus produced, which in a susceptible subject will not only be kept up in the injured tissues, but will extend to the throat and tonsils, and then remain in a chronic state so long as the cause is allowed to exist.

In these cases the better remedy is to remove the tooth, seeing that, from its position, it is wholly useless; or, if this be objected to, the overlapping piece of membrane should be removed with a pair of curved scissors; a remedy may also be effected by the frequent application of caustic.

It is obvious that the evils produced by the development of irregularly placed wisdom teeth arise wholly from pressure produced by the gradual growth of the dental pulp, preparatory to its calcification; by which the superimposed tooth is forced against the tissues by which it is covered. In the natural course of things these tissues are absorbed, and make way for the rising tooth; but if they are not absorbed, and therefore resist the advance of the tooth, the pressure reacts through the tooth upon the developing pulp.

The pulp is very plentifully supplied with nerves, and moreover is placed immediately over the large dental nerve (at least in the under jaw).

We all know that pressure upon a nerve or nerves, though slight in degree, will produce more or less pain, and that the pain will be felt in the part to which fibres pressed upon are ultimately distributed. Instead, then, of being surprised that interruption to the growth of a tooth should produce pain extending through the whole jaw, or to the side of the head, or about the ear, we should be led to infer that such phenomena would exist. It would be, perhaps, difficult to estimate the actual amount of mechanical force developed by a growing tooth, but we may form some estimate by observing the force generated by growing vegetable. We have most of us seen a tolerably weighty piece of stone raised by the growth of a plant beneath, any fibre of which may be readily crushed beneath the thumb and finger.

Pressure, moderate in degree and equally applied, will lead to the absorption of tegumentary tissues; but if the pressure be great, and unequally applied, instead of absorption we have induration and pain—a fact those who have worn tight boots are willing to admit. If a tooth be developed more rapidly than the superimposed gum is absorbed, gradually increasing pressure will be applied to the gum, which will then become indurated and painful, and the symptomatic disorder I have alluded to may arrive.

In all cases of inconvenience arising from malposition of the wisdom tooth, either the tooth itself or the parts obstructing its development must be removed.

The evil will, however, if not in itself considerable, and the patient has sufficient endurance, after a time terminate. The development of the tooth will cease in the formation of very short fangs, and the pressure no longer generated, will cease, and the patient will be restored to comfort.

I have omitted to mention, that irregularity in position is sometimes caused by tumors growing from the gums or alveoli, but as we shall, in a future lecture, consider the history of diseases of that nature, I need not detain you now by describing their effects.

LIGATURE OF A POLYPUS.

Augusta S., 45 years of age, unmarried, had long complained of pain and difficulty of making water, of bloody urine, &c., when one day suddenly a dark red body, which bled freely, presented itself between the labia. Careful examination discovered it to be a polypus, the size of a hen's egg, and projecting from the urethra, which could readily be entered with two fingers, and the pedicle of the polypus followed into the bladder. I succeeded in throwing a ligature round it by means of two elastic catheters, and then with a proper canula, constricted it as far within the bladder as I could reach. On the sixth day the polypus fell off. The patient recovered. *Dr. Thieneman, Med. Zeit.*

Original Communications.

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

On no subject in the whole range of medical science has more been written than on inflammation: a fact sufficiently indicative both of the importance and difficulty of its study. Nor can any investigations yet published be said to have so far settled the various questions involved in the consideration of the precise nature of this disease, as to preclude others from entering upon the same field of inquiry. Indeed, most of the writers upon inflammation seem, in some measure, to have evaded the discussion of the great point, as to its essential nature, and have contented themselves with describing the order of production of its symptoms and effects. The professed definitions of it which I have met with, have generally been of two kinds: either an enumeration of its phenomena, varying in length from the classical brevity of Celsus to a tedious diffuseness which filled more than one page, or some dogma which appealed rather to the faith than to the reason of the inquirer. Those more rational doctrines, in which it has recently been endeavoured to base the elucidation of its pathology upon the disordered condition of the circulation in the affected part, will, of course, be hereafter considered in detail. But before stating the experiments and reasoning which appear to me to establish certain views in this department of the pathology of the circulation, I may, perhaps, be permitted to allude to a circumstance which has, in my opinion, prevented those doctrines, though ably advocated, from conducting to any satisfactory and final solution of the difficulty: and that circumstance, is the paucity and indirectness of the facts on which they rest.

In order to test the accuracy of this statement, let any one examine for himself the different works on inflammation, and scrutinize and classify the facts adduced in support of the various views therein advocated. And with the exception of those long-observed phenomena which, though recorded for centuries, led to no extension of our actual knowledge of the disease, these facts will be found to consist of experimental observations upon the lower animals. It is exclusively from the latter that the more precise information which we now possess on the subject has been derived; and from them also have originated all the modern ideas as to the essential nature of inflammation and its allied morbid conditions. The importance of a clear conception of the force and pertinency of these facts, and of the extent to which the resulting conclusions may be applied towards the elucidation and settlement of the general question, will therefore be sufficiently obvious.

These experiments may be conveniently considered under two heads. In the first division we have those performed by Hunter himself upon some of the higher animals; in the second group may be comprised all those numerous microscopical observations upon the transparent tissues of various reptiles and of certain of the higher animals, in which the successive phenomena presented by a part artificially inflamed have been carefully watched, and minutely described, by Wilson Philip, Hastings, Gendrin, and a host of observers.

Now it can, I think, be shewn that all these experiments and observations, though most valuable from the light which they have cast upon the mode of production of certain of the symptoms, and the order of development of the effects of inflammation, do not, if *fairly* considered, conduct the unprejudiced mind to any direct and positive conclusion as to the essential nature of the disease. Before endeavouring to establish this point by a brief review of Hunter's experiments, let me utterly disclaim all idea of attempting to detract from his well-earned fame. On the contrary, as the first successful cultivator of experimental pathology, he has ever been a peculiar object of my veneration: and it will, if I mistake not, be in after ages considered not the least brilliant achievement of human genius that it furnished this great man with sagacity to perceive the inadequacy of mere *observation* as an instrument for pathological discovery, and with ingenuity and boldness to *combine with it* the more subtle and far-reaching agency of *experiment*. In acting thus, it is true that he did but follow out, not only the general principles of the Baconian philosophy, but the suggestions made almost on this very point by that wonderfully-gifted man. The gratitude and respect of posterity are, however, not the less due to him who actually effected the first step towards the elevation of medicine by rendering its most important branch an experimental science.

The only experiments of Hunter which can be considered as calculated to throw a direct light upon the nature of inflammation, are the two following:—1st, that of freezing the ear of a rabbit; by which he proved that the vessels of an inflamed part are much enlarged, contain more than their natural quantity of blood, and retain that increased calibre for some time after the withdrawal of the exciting cause. 2dly. That of inflaming the vagina of an ass; by means of which he discovered the beautiful law, that the temperature of an inflamed part does not rise above that of the central organs of the body. The facts thus ascertained, and the additional experiments which he instituted relative to the contractility of the arteries, and the peculiarities of adhesive union and growth, are confessedly important, original, useful in enabling us to understand the manner in which certain effects of the disease are produced, and in some respects deeply interesting, as possibly constituting the germs of more important discoveries. But, while freely admitting all this, I defy the most zealous Hunterian to deduce from them a clear and satisfactory definition of inflammation.

The experimental observations of Thomson, Philip, and others, next claim our attention. These, even more than those of Hunter, have served as the chief support of all the modern views on the pathology of inflammation. That they have supplied a number of very interesting and important facts, by which we have been enabled to understand the order of the phenomena which occur in a part inflamed by the application of a local irritant, no one can deny. Where, formerly, all was vain conjecture, we have now, through them, obtained a minute and well-authenticated history of the successive changes which occur in a part thus affected. For it may be assumed that in conjunctivitis following the lodgement of a foreign body on the eye, or in any other case of inflammation consequent on the application of a local irritant, the course of events is, in the human body, analogous to that witnessed under the microscope in the web of a frog's foot, or in the mesentery of the mouse or rabbit. But I cannot perceive how this information is to suggest the immediate cause, or explain the nature of idiopathic inflammation. Nor am I satisfied that the most minute observation of its effects will, in this or any other case, lead to the detection, or elucidate the operation, of the immediate cause of a disease. And, in the present instance, it must be confessed that, so far from having settled the discussion as to the essential nature of inflammation, these microscopical observations, by introducing into the consideration of a subject already sufficiently complicated innumerable obscure questions connected with the physiology and pathology of the blood, have added much to the difficulty of reducing this chaotic mixture to something like the harmony and simplicity of truth.

I have now endeavoured to shew that all these experiments, though most useful and valuable so far as they extend, nevertheless fail to impress the mind with any satisfactory and definite opinion as to the nature of the particular pathological condition essentially constituting inflammation. In order to attain that knowledge, additional facts are required, which shall exhibit in a clearer light than has yet been accomplished, the operation of each of the two great causes of disordered circulation. And it is only by the aid of a body of experiments, undertaken for that object, and tolerably conclusive in their results, that I can indulge in the hope of being enabled to advance the settlement of this long-agitated question.

The great confusion which now surrounds the subject of inflammation, has apparently arisen, not more from its intrinsic difficulties, than from the clumsy, ill-arranged, and disorderly manner in which its study has been conducted. Instead of resolving into separate questions the numerous considerations which spring from an observation of its attendant phenomena, and then examining each singly, we find writers losing themselves, and bewildering their readers, by attempting to grasp, and master at once, a host of problems, among which are some of the most important, the most extensive, and the most difficult in the whole science of life. Thus, in most treatises on the pathology of this disease, we find heaped together in one confused mass, dissertations and conjectures of various length, according to the particular views of the author, upon each of the following, in addition to other less important topics—viz. the reciprocal influence of the different parts of the nervous sytem upon the circulation of the blood, and of the circulation upon the action of the nerves; the peculiar functions of the ganglionic nervous system; the chemical composition, and minute anatomical structure of the blood in general, and of that in the inflamed part in particular; the mechanism of the circulation, and more especially the nature of the forces carrying the blood through the capillaries; the physical, vital, and, according to some, electro-vital properties of the latter vessels; the mode of operation of the self-coagulating and self-organizing principle of the blood; the order of development and minute peculiarities of the phenomena thus induced; and the nature, origin, and action of the "*specific*," or unknown, causes which so frequently and so powerfully modify those effects.

Now an examination of some of these points certainly constitutes an essential preliminary to the study of the pathology of inflammation, but they need not be continually introduced in the discussion of the greater question; and there are others, perhaps a majority of them, which the present imperfect state of our knowledge will not allow us satisfactorily to decide, and which a spirit of philosophical prudence would therefore rather reserve for future investigation.

Leaving, then, for another opportunity, or for other persons, the consideration of these and various other interesting and important matters connected with general physiology and pathology, let me briefly state the manner in which I propose to conduct this inquiry. For it seems to me that the only sure way of progressing in this, or any other department of pathology, is to lay down and strictly adhere to a clear, well-defined plan of procedure.

In all the different forms of inflammation, however modified its effects, however varied its causation, the same term is universally applied to denote the general nature of the disease. Whether, in any particular case, it be regarded as adhesive, suppurative, erysipelatous, syphilitic, rheumatic, scrofulous, acute, or chronic; in short, whatever may be the epithet joined with it to express some peculiarity in its origin, intensity, or effects, the same essential pathological condition is always admitted to be present. It has further been established by the latest inquirers, that certain physical phenomena invariably accompany it as immediate effects, and constitute the only satisfactory proofs of its existence. Now, the task on which I am about to enter is the elucidation of the nature of this constant pathological condition, and the explanation of the manner in which it is itself produced, and of its mode of action in causing those definite effects which so generally result from its continuance. And it is solely to the illustration of what I may be allowed to term the mechanism of inflammation that my facts and arguments will now be directed. The peculiarities of action of those subtle and ill-understood causes which induce the varieties met with in its *secondary* effects, must remain for the most part unintelligible till such time as the accumulation of a mass of fresh facts shall enable us to deduce laws capable of dispelling the darkness and mystery in which they are now enveolped.

[To be continued.]

CASES OF
STRANGULATED HERNIA,
WITH SOME REMARKS PRINCIPALLY INTENDED TO SHOW THE NECESSITY OF AN EARLY RESORT TO THE OPERATION.

BY JOHN C. WARREN, M.D.
Professor of Anatomy and Operative Surgery in Harvard University, Boston.*

THE time, after strangulation, at which the operation for strangulated hernia should be performed, is not satisfactorily settled. Many practitioners, before resorting to it, employ various other measures, and frequently repeat them, until the patient's strength appears to be failing, and it becomes obvious he must perish unless relieved by the knife of the surgeon.

This was my own course, when I first began to operate for strangulated hernia in Boston, about the years 1803 and 1804. This operation had then never been performed here, so far as I can ascertain, or, at least, had never been successfully performed. Physicians were, therefore, at that time unwilling to advise an operation which appeared to them to be a novelty, and patients were slow in consenting to submit to it. The period of the operation was, for these reasons, in many instances postponed too long, and notwithstanding the utmost efforts by taxis, a number of unsuccessful cases followed. Having noticed this, I endeavoured, from time to time, to impress on the minds of those with whom I had occasion to consult, the importance of an early resort to the operation. This doctrine has proved so successful here, that most physicians in this place recommend the operation, and most patients are now willing to submit to it, immediately after the common means have been found unavailing. The results of this change of practice are so successful, that, in my own experience, I am not able to discover more than a single instance of unfavourable termination within the last six years, and this took place in a man who was not operated on for more than three days after strangulation, whose case is alluded to hereafter.

In order to give some of the results of my experience as to the utility of this practice, I have thought it might be useful to present the following cases. They may also do something towards the illustration of other points of hernial pathology and practice, especially these: first, the situation of the stricture, whether in the abdominal ring or the neck of the hernial sac; second, the simulation of strangulated hernia by peritoneal inflammation in the sac and its vicinity; third, the practicability and utility of dividing the stricture, and reducing the hernia, without opening the hernial sac; fourth, the possibility of conducting the subsequent treatment, so as to give the patient some security against the return of the rupture after his recovery from the operation. I would have it understood, that it is not my intention to present a statistical record, but rather to bring forward a few cases in detail, calculated, so far as they go, to explain the manner in which I have treated this affection, and also touch upon the points above mentioned.

---

* Communicated by the Author.

The first case, which we shall now record, illustrates, firstly, the advantages of an early operation; secondly, the seat of the stricture; thirdly, the practicability of dividing the abdominal ring without opening the sac; fourthly, the practicability of returning the hernia without opening the sac.

Case I.—*Strangulated Inguinal Hernia reduced by an operation without opening the hernial sac.*

A gentleman of Boston, aged 76, who had had hernia for a great number of years, was attacked in June, 1824, with symptoms of strangulation. The hernia had been a reducible one, and had repeatedly been strangulated. The size of the tumor was large, being as much as seven inches long, and of proportionate diameter.

On the occurrence of strangulation at this time, the taxis having proved ineffectual, the patient took first a common injection, then a warm bath, and afterwards had leeches applied, followed by cold applications: the treatment of the day was concluded by putting him under a very large dose of opium. On the next day, the hernia continuing in the same state, pressure to reduce it was once more tried, and the patient placed in different positions to aid it. He now began to vomit, and was in considerable distress; I therefore determined to do the operation as soon as his consent could be obtained. The operation was performed thirty hours after strangulation.

An incision, four inches long, was carried from a point an inch above the abdominal ring to the upper part of the tumor; the external fascia was dissected, the tendon of the external oblique muscle exposed, and a small puncture being made in the fascia below the ring, the point of a director was passed into this passage, and the ring dilated without opening the sac. Pressure was now applied to the rupture, which seemed to consist principally of intestine, and the contents of the tumor were returned into the cavity of the abdomen. The wound was brought together, united by the first intention, and the patient was well in a few days.

He lived a number of years after, and had no further trouble with his rupture, although it continued to descend.

Case II.—*Strangulated Crural Hernia; operation twenty-four hours after strangulation; discharges of blood from the wound eleven days after the operation; discharges of blood from the vagina twenty days after the operation: recovery.*

A lady, 82 years of age, subject for some years to crural herina of the right side, was attacked, on the 17th of Nov. 1838, with symptoms of strangulation. She had pain in the tumor, a sense of stricture, as of a cord extending from the stomach to the right groin, vomiting, and obstinate constipation.

Her physician, Dr. Homans, employed the taxis, used active injections, which were returned with a small portion of fæces, and gave a purgative of castor oil, which was thrown off. Cold applications were then made to the tumor; these were continued from the evening of the 17th to that of the 18th, without effect. At this time I was desired to visit her in consultation.

I found the patient suffering considerable pain in the tumor, and in the abdomen generally; the latter was tender and somewhat swelled; the pulse was quick; she exhibited much restlessness and anxiety. Placing her on the right edge of her bed, the right knee being elevated and supported, I proceeded to make pressure on the tumor. This tumor was about three inches in diameter, situated at the upper and inner part of the thigh, principally below Poupart's ligament, though part of it rose above. It was tender, as before stated, and elastic, appearing to be composed mostly of intestine. The pressure was continued for some time, and varied as to its direction, so as to give every possible chance of reduction, if pressure could reduce it. After efforts continued for ten or fifteen minutes, I judged it to be impracticable to effect the reduction in this way, and advised an operation without further delay. This being agreed to, was immediately performed at 8 o'clock on the evening of the 10th of November, twenty-four hours after the attack, in company with Dr. Homans and Dr. Mason Warren.

The patient was placed, as before mentioned, on the right edge of the bed; an incision, three inches long, was made over the middle of the tumor. The coverings of the sac were very thin; the sac itself was exposed and opened in two or three minutes; the contents were found to be intestine with a small portion of omentum. The stricture being sought for, an obstacle to its discovery was found to exist in a portion of fascia, which covered over and extended on to the neck of the sac, probably the cribriform process of the fascia lata, constituting a lower or outer ring. This fascia was divided by introducing the nail under its edge, and following the nail by the probe-pointed bistoury. The aperture of the upper or inner ring was then reached at the posterior and inferior edge of the oblique muscle, which was incised.*

The hernia was now readily returned, and immediately the motion of air through the intestines was heard. Two sutures were made in the integuments, and a bandage with compresses carefully applied. In twenty minutes the patient had an evacuation from the bowels. She passed a comfortable night, and on the following morning took a cathartic of senna, which effectually relieved her.

The principal part of the wound united by the first intention; its inferior angle continued open. She had no unpleasant symptoms until the eleventh day after the operation, when a copious venous hæmorrhage occurred from the lower part of the wound. Cold spirituous applications, with compression, were made over the wound, and the pulse not being accelerated, cordials were administered internally. After three days of hemorrhage and great consequent prostration of strength, the discharge ceased. After this she continued to convalesce till the 10th of December, when, without any precursory symptoms, she had a considerable flow of dark-coloured blood from the vagina, by which she was extremely prostrated. On examination, nothing extraordinary could be discovered in this part or in the uterus. Cold astringent injections were used, and she took astringents by the mouth. The hemorrhage ceased as suddenly as it appeared, and she had no recurrence of it.

From this time her recovery was regular, though she kept house through the winter. In the following summer I saw her walking in the street, and at this time, Oct. 1844, she still retains her health.

CASE III.—*Strangulated Inguinal Hernia; operation twenty-four hours after strangulation; stricture dilated by a small incision, and the hernia returned without opening the sac; recovery.*

Samuel Hoit, a sailor, single, 32 years of age, was admitted to the Massachusetts General Hospital, on April 10th, 1842; for strangulated inguinal hernia. The hernia had existed about fifteen months; it had occasionally descended, and been reduced without much difficulty; but about half-past four in the afternoon of April 9th, being in the cars coming from New Bedford to Boston, the hernia descended, and every effort at its reduction for eighteen hours having proved unsuccessful, he was taken to the hospital.

On examination, there appeared over Poupart's ligament a superficial excoriation, covering a space an inch and a half by an inch in extent, beneath which the skin and cellular substance were so hardened as to render it impossible to feel the external ring, the effect of a truss with a wooden pad, which he had recently worn. In the right side of the scrotum was a swelling about four inches long, compressible, not translucent, very tender.

---

* In the operation for crural hernia, I have almost always relieved the stricture by cutting the ligament of Gimbernat at the inner part of the sac; but in this case the stricture was more distinctly perceived at the anterior part of the neck of the sac; this part was, therefore, divided, instead of making a search for the ligament of Gimbernat.

Taxis was tried, but without effect; he was then placed in a bath as hot as he could bear it; in this situation he was bled twenty-four ounces; an enema of soap and water was afterwards administered. As these measures were not attended with success, the operation was agreed upon, and performed at half-past four in the afternoon, twenty-four hours after the strangulation, and six after his entrance to the hospital.

Much having been said about a subcutaneous operation for strangulated hernia, I thought it might be well to attempt it in this case. Accordingly a very small incision was made a little below the abdominal ring, of a size sufficient to admit a director. This being passed into the incision, preparatory to the use of the knife, an attempt was made to insinuate it from below upwards through the fascia into the abdominal ring; but I immediately perceived that the attainment of this object was not without difficulty and danger, as a very delicate movement of the knife was to be made without the aid of either the touch or the sight. This plan was, therefore, at once relinquished, and I made an incision, three inches long, through the skin and cellular membrane down to the fascia of the oblique muscle. This fascia being opened below the abdominal ring, a director was passed upwards into the ring, which was dilated by a probe-pointed bistoury sufficiently to allow the return of the hernia whithout opening the sac.

The patient expressed himself as at once relieved from the general griping pains in the abdomen; and in half an hour after the operation he had a copious evacuation spontaneously. The wound was brought together by a suture, covered with lint, which was kept in place by a T bandage. No bad symptoms appeared subsequently, and he recovered rapidly from the effects of the operation.*

Remarks.—The great advantages which have been derived from the subcutaneous mode of doing certain operations, have led to a proposal for its employment in the operation for strangulated herniæ. If the sac could safely be opened, the stricture satisfactorily divided, and the hernia perfectly reduced by a mere subcutaneous cut, a great improvement would indeed be obtained by the introduction of this way of operating. But if, to avoid an incision of three or four inches in skin and cellular texture, we must run considerable risk of puncturing the hernial contents by a blind subcutaneous incision, then this proposal would not seem to merit an introduction into practice. Besides the danger of puncturing the hernial contents, there would in some cases be a danger of returning a gangrenous intestine. These objections to the proposed method of operating, without looking for others, seem to me quite sufficient. I know that it has been successfully performed; but a few instances of success would not weigh much in my mind against the objections alluded to.

[To be continued.]

HOW TO CONDUCT A PATHOLOGICAL ANALYSIS OF THE BLOOD.

BY DR. G. ZIMMERMANN.

1. A GLASS containing exactly 1000 grains of water is filled with blood directly from the vein; a glass stopper fitting hermetically is then inserted, (care being taken to remove all bubbles,) and the specific gravity of the blood ascertained. By continually shaking it, the blood is kept fluid; it is then poured into a porcelain vessel, and evaporated, care being taken to wash the glass out with distilled water, and add the latter to the other. The quantity of solid residue is reduced to the proportions in 1000 grains of blood. 2. A glass 2½ ounce measure is filled with the blood immediately after the preceding, covered, and set aside for eighteen hours. The clot is then carefully separated from the serum, and the weight of both ascertained. 3. The clot is now to be pressed through a linen cloth four inches square, and first the fibrine, then the fluid cruor collected. Each is thoroughly washed, freed from moisture, and weighed; they are then carefully dried, and again weighed. The results are to be reduced to the proportion in 1000 grains of blood. 4. The serum and clot are to be placed in a glass containing 630 grains of distilled water, and their specific gravity noted; then 250 grains of each at the same temperature, are to be dried so long as they lose weight; the weight of the residuum is then to be reduced to the proportion of 1000 grains. There is a loss of weight by pressure through the linen, but as it will happen in the same proportion in all instances, the results are correct."—*British and Foreign Medical Review.*

---

* This man, about four weeks after the operation, died of accidental small-pox.

ON PHYSIOLOGICAL AND PATHOLOGICAL TENSIONS, AND ON GLANDULÆ PACCHIONI.

By T. Wilkinson King, F.R.C.S.E.

Pressure on bone and extension of tendon cause nutrition. The forces declining, atrophy follows.

Calvarian pits and dura matral ridges and fossulæ produce glandulæ, with peculiar tensions.

Granulation always minus as to tension.

A settled impression of the practical value of the principle indicated by the title of these notes, induces me to write down for publication a crude set of reflections, which I am fully sensible can have but little attraction except as any one may chance to have his opinions led in a similar direction. I find also a hope of usefulness in the prospect of contributing towards the final and systematic establishment of the doctrine in question.

In good health the sockets of the teeth maintain their well-raised edges through a long life. If a tooth finds no resistance it furnishes but a passive stimulant to the cavity which holds it; if it be removed its cell wastes away.

The fore teeth of the sheep are somewhat horizontal, and are not pressed into their sockets, but the crowns, so to speak, are pressed outwards; but it is only in an ill-nourished body that the cutting edges become everted and scattered, through the failure of that bony support which the pressure regulates so precisely in health.

When the knee is the seat of bony ankylosis the cancelli of all the bones are continuous; excavation removing all the particles of bone deprived of their due tensions, and new ossifications strengthening other points (reticular columns or superficial thickenings) as greater strain begins to disturb them.

There are in the skeleton a vast number of holes, disregarded by anatomists, but to the physiologist they are at least pretty signs of modified tensions. The walls of these *oval* openings are stout little buttresses (external cancellar columns).

Many of these perforations or pits are pathological, or their epoch might be placed between health and disease. Transcendental anatomy might call them transitions or analogies.

Above and between the condyles of the femur anteriorly the shell is thin, the punctures various, and their sides fortified. All long bones, &c. may present some of those atrophies. The bodies of the vertebræ seem the most remarkably pierced (in our bodies) unless when disease makes the weight excite undue partial nutrition. Even the great venous canals and their openings owe their site, size, and existence to declining pressure.

The tensions of the palate are in a measure like those of a drawbridge. The sacrum resembles the bone in the horse's hoof; while it sustains so much it is in good part in a state of suspension, and its columnar tissue is accordingly spread out or perforated No doubt ligamentous attachments decide little osseous arrangements, ridges, &c., but it is the absence of tensions that causes wastings. The effects of use and disuse are well contrasted in a skeleton at Guy's. A man, long paraplegic, went about town by the exertions of his arms. The shaft-bones of the legs are greatly attenuated.

Anatomists have hardly noticed the fact, that the adult calvaria is prone to atrophy, if not constantly, at least more frequently than otherwise. This wasting in health is only a part of the natural course of the aging skeleton, but it assumes especial traits at the summit of the circulation. I have only now to speak of a more or less complete row of pits along each side of the longitudinal sinus from the forehead to near the occiput. These foveæ, more or less symmetric—varying about the size of a grain of wheat—often leave the external table translucent. It is about the vertex or anteriorly that they seem most remarkable.

I have said, two rows of pits more or less symmetric. This I conceive to be the final, more complete, and rare appearance; and in such cases I would advert to the intervening ridges that are left, and perhaps even strengthened, under the influence of greater tension.

The actual cause of these excavations may be doubted, but to my mind the decline of tension at certain definite points in the vault of the skull (no-inconsistent with other increased tensions) determines the locality, order, and relative position of these absorptions, which also indicate the state of the nutrient fluids.

It is true, irregular pits are found, and perhaps near an inch in length, especially at the vertex; yet still I impute the atrophy to a want of tension. In such a case large patches of glandulæ may form in lateral veins between layers of dura mater—(Vide Guy's Museum).

The ridges, &c. within the skull owe much to dura-matral tractions, yet in health it is impossible that a buttress should not form where even mere vibration is in sufficient force to excite nutrition; and where tensions fail or decline, atrophy must proceed. The tenuity of occipital fossæ, and the roofs of the orbits, is natural, and also that of the temporal fossæ, which is rather protected from external pressure than subject to a great share.

It now seems almost indispensable to my purpose briefly to advert to the tensions of tendinous fibres.

A friend said to me, I cannot find endosteum in the tube of the femur. He looked where atrophy with declining tension prevails. Even periosteum is only fibrous and strong just where it is subject to extensions. The obturator foramen of the pelvis, and the notch of the scapula, with their ligaments, are visibly modelled by modified tensions.

There is no fibrous pericranium above, but the dura mater, and likewise the albuginea and sclerotica, are indeed tense membranes. Why are they stout? I do not hesitate to say, because of extensions. The boldest fibres are ever perpendicular, so to speak, to the more concentrated forces of dilatation, &c. The moulding of the skull to the cerebral gyri shews the force of vascular distension. And if we imagine the bone powers expended on resisting external pressures, muscular, &c. the dura mater is exactly in the place of the sclerotic or albuginea* as to vascular distension, with the addition of one grand modifying force—the gravitation of the brain on its great septa (directly and indirectly, alternately on each, as posture varies.)

It will be hard for phrenology to prove that the temporal muscle has no share in modelling the skull; so of all the mass of occipital insertions. Is it possible for the occipito-frontales to leave the growth of bone to take its own course?

We must not suppose that there are not very different tensions in operation on different parts of the interior of the skull and its lining.

While the venous sinuses are in a degree shut out from the great cavity, their distension may be plus or minus, but this is by no means applicable in the same degree to the tension of the cerebral septa and their connexions*. The weight of the brain, and the force of arterial impulse and modified pressure of brain inertia, in locomotion, have very efficient and durable influences.

The object of all these reflections is to introduce to observation the varying tendinous reticulations lining the old dura mater on each side of the root of the great falx. It is impossible not to see that the development of these ridges is according to special definite extensions. The fact of countless little deep interstitial pits on the dura mater as a consequence or concomitant, is only important to us now with respect to the corresponding development of granules on the opposed brain surface, or continuous arachnoid.

The cordæ Willisii are arranged as in reference to like tension. Their interstices form similar pits, and produce the like glandulæ, which, however, are confined to the three lines or sulci formed by the union of two sides of their triangular sinus.

The dura mater covering the pits which I have described on the inner surface of the calvaria has a tendency to yeld also to atrophy, and even disappear. It may be bounded or traversed by clean threads of tendon, which I conceive to be made more permanent by extensions operating towards their extremities, while the interspaces may decline with the partial failure of direct vascular distension. It is notable still that a cavity forming between the bone and dura mater has specific effects on the membrane, which becomes flat instead of concave inwards; at the same time, the vascular tensions within and without the new cell become more alike, and, as a matter of fact, the dura-matral attachment around the pit is usually more firm*. Even this compensation for so much lost attachment I imagine to depend on the consequent increased tensions acting on the circumference. Remove one half of the patella, or heel, slowly or suddenly, and the remaining attachment of the great tendon will become proportionately consolidated. Prevent all natural reunion of a divided tendon, and a new attachment will be formed laterally, but only for the *muscular* portion, while the other wastes. I have, in other places, pointed out the agency of extension in the evolution of ligament, &c. The following is an additional example :—

---

* The sclerotic has muscular compressions, the albuginea has blood gravitations to cause tension.

* Fibrous cyst or tumor owes its arrangements to inherent causes, while blood regulates its substance.

Tendon-union—experiments on dogs. —On the second or third day, the cellular tissue of the retracted tendon was thickened, and formed a kind of canal, which was complete except at the point where the section had been effected. The canal and ends of the tendon were of a bright red. It was empty, or full of clots. On the ninth day the sheath was very much thickened, and a firm bond to the two divisions; its canal narrow, and the puncture lost.

From the 12th to the 18th the new mass appeared a cord about equal to the tendon itself, and partly fibrous. On the 24th day the canal had disappeared, the cord was fibrous, greyish, and very different from tendon.

It is here made very apparent that the cut ends of the tendon share but little in the repair. (Malgagne, Bouvier, and Velpeau; Forbes' Review, Oct. 1840, p. 346.)

The evolution of cells, and their uses as indicated by the microscope, are in good part satisfactory enough; but when the micrographer attributes independent life—vegetating powers—to the cell, he perhaps goes too fast. Moisture, heat, and pressure, depend on surrounding tissues, and above all, the constitution of the fluids forming and acting on the cell, whether physical†, or chemical, or vital, has at least as great a share in causing changes in the cell as the cell has in causing changes in the blood.

Dr. Todd states "that he has never seen the glandulæ at a period antecedent to six years. The Wenzels that in children from birth to the third year, if the bodies ever occur, they must be few; from the seventh to the twentieth year they sometimes are numerous; from this to the fortieth year their number is considerable and increasing, and so on continually. At all ages they are still varying and uncertain." "They are peculiar to man," and he thinks "dependent on mental or spirituous excitements, or a slow irritation, and perhaps friction."—(Anatomy of the Brain).

In Quain's Anatomy (fourth edition) I find a remark connecting some glandulæ with cranial pits. According to my present view, a pit is ever the cause of the granule; but I conceive that motion, attrition, and pressure, must affect its growth.

The following is Dr. Todd's view of the structure of the glandulæ, or rather of those which protrude arachnoid membrane. "Each seems to consist of minute granules inclosed in a membranous sac; and if peduncular, its stalks present longitudinal striæ or folds (*tendons?*) In dilute acetic acid it swells into a jelly, and its surface sometimes displays epithelial scales.

The granular mass under the seventh nerve (the brain being inverted) forms in a pit where the motions of the head would almost seem to form a degree of vacuum.

If the coronal suture were angular, and its dura mater divided into bands and reticulations, we might almost fancy that a crop of granules on the opposite arachnoid would help to resist too sudden motions of the brain, so to speak.

---

* So when necrosis leaves a spot of dura mater granulating and even wasting.—Vide Guy's Museum.

† When a cell has elongated to form a vessel, and, by its extremity, projects into another cavity, and bursts into it, we have all that is necessary for the formation of a valve; tensions and refluxes will regulate the nutrition of each part; the want of tensions determines modelling atrophies, and even the physical circumstances of the primitive event may lead to the evolution of pairs or triplets of curtains, &c.

It is clear that a current without reflux, as in some veins, must cause atrophy of valves, and the location of valves in veins seems just as the need of them. Their persistence in lymphatics is not less in accordance with little and repeated tensions, and the whole vessel indicates the nature of its actions, its nutritions, and intentions —delicate and rapid functions.

Comparative anatomy favours these opinions. I have thought that a peculiar reflux might induce the development of a valve, but I rather conclude, that the rudiment of curtains is lavishly produced, and only sustained by use, wherever reflux is sufficient and repeated, and distension never exceeding.

When we consider the condition of new granulations in comparison of settled tissues, we find the same atmospheric pressure operating every where equally; but the case is different with regard to pressures and tractions acting on a cicatrized and uncicatrized part. In fact, the free granulation is, as it were, in partial vacuo; not as relates to the air, but with respect to the circumambient tensions, which are in endless and varying operation on all parts within the cuticle. No sooner is the sore covered in, and the ordinary movements of the parts in free action upon it—compressing and stretching—than, in common language, cellular membrane begins to be formed out of granulations not a little as a mere agglutination of serous surfaces (by stretching, rolling, and pressure), forms an adhesion.

We find, then, the glandulæ—pit-grains or pit-growths, for such they really are—in three different situations at least, always preceeded by pits, which, in the main, far exceed them in size, subject to varying degrees of attrition, according to which their solidity seems to vary, and liable to a varying diminution of atmospheric pressure, and to varying capillary supply. Here are strong peculiarities, of which the reader may weigh the import, after he has minutely examined the demonstrative facts.

It is ever evident that the pits and tendons precede the granules which are not of a size or aggregation to be the producing causes of the containing cavities. The pits may be devoid of grains, or contain only the most rudimentary forms. No grains are found without a cavity. Even the granular masses between the pons varolii and lobes of cerebellum (*above* the seventh pair) appear under like physical circumstances. The dependence of the grains on the pits will explain the constant limitation of their growth.

In the Med. Gaz. for May 1845 will be found various referencesto my views of tension as a vital principle.

26, Bedford Square.

MEDICAL GAZETTE.

FRIDAY, JULY 3, 1846.

We stated in our last article on the subject of the African fever, that a difference of opinion respecting its alleged propagation by contagion, had arisen between Sir W. Pym, the Superintendent General of Quarantine, and Sir W. Burnett, the Director General of the Medical Department of the Navy. In the correspondence on the "Eclair," we find several letters in which these gentlemen have been allowed to comment upon each other's views, for the benefit and instruction of the Lords of the Admiralty. But for the intelligence lately brought from the Cape Verde islands, and here laid before the public, the question would have remained as unsettled as ever. We think, however, there is enough contained in this correspondence to shew that those who regarded this disease as contagious, adopted a correct view; and that the non-contagionists have only to modify or retract their opinions.

As Sir W. Burnett correctly observes, "the present is the occasion which ought not to be neglected, in which the infectious or non-infectious nature of the disease in question may be brought to a complete test, and finally settled. It is perfectly well known that the communication between the inhabitants of Boa Vista and both the Eclair and Growler, was entirely unrestricted; indeed, so much so that the late commander, Estcourt, and the purser, resided in the town. In short, the parties mentioned, visited and mixed together freely. If it can be fully and satisfactorily shewn that any person who had so visited the ship or tents where the sick were placed, contracted the fever in question and communcated it to others, and they to other persons in succession, who had never visited the ships or sick, then there can be no reason to doubt the infectious nature of the disease; but if nothing of this kind has taken place, then the conclusion must be that the disease is not infectious, and is therefore incapable of being communicated: in either case settling this long-contested question."

In the medical report of the state of the vessel, drawn up by Dr. Stewart, we find the question of contagion or non-contagion put upon the same issue. After noticing some circumstances which occurred at Boa Vista, apparently favourable to the contagious propagation of the malady, Dr. Stewart's twelfth conclusion is,—"Four months have elapsed since the ship left Boa Vista, and the public have not yet learned that the residents there have suffered from any of these circumstances." In another part of the report, Dr. Stewart states:—

"When drawing out this report I attached great importance to the supposed immunity of the inhabitants of Boa Vista from fever, after their intercourse with the crew of the "Eclair," as already stated. Since then an official communication from the Portuguese Consul-General, dated the 19th of January, has been published in the "Standard" newspaper of the 20th instant, announcing that a malignant and contagious disorder had made its appearance at Boa Vista and St. Nicholao, and that the most efficacious measures and precautions were being taken to prevent the spreading of a contagion of a typhoid nature, and supposed to be yellow fever. It only remains for me to state, as I attached so much importance to the supposed immunity of the inhabitants, I will most readily acknowledge my error if it shall appear that the fever with which the inhabitants at Boa Vista are afflicted, first made its appearance after a reasonable interval, in any of those who had been in communication with the crew of the 'Eclair' either in the town or at the fort; or if it first appeared amongst any of the Portuguese labourers who were employed in the 'Eclair,' and subsequently extended either to the families of these labourers, or any of their acquaintance who visited them when ill."

Here the elements for solving the question are so simply stated, that we need scarcely do more than refer our readers to the extract from the letter of our consul for these islands*. Unless we entirely disbelieve the statements officially made by Mr. Rendall, we do not see how Sir W. Burnett and Dr. Stewart can, upon these premises avoid coming to the conclusion that the fever was of a most infectious nature.

To enter into the dispute repecting the origin of this fever, *i. e.* to attempt to determine whether it be, as Sir W. Burnett declares, only the common remittent fever of the coast, arising from marsh miasmata and rendered more fatal by excesses and irregularities among the crew; or whether, as Sir W. Pym contends, it be in no way connected with malaria, but identical with the African and black vomit fever, appears to us, at the present time, quite unnecessary. No one thinks of inquiring respecting the origin of small pox or measles, and yet these diseases have had an origin in some inexplicable way. The practical bearing of the question is, whether the fever when it has once attacked an individual or the crew of a ship, is likely to spread among others who have not been exposed to the same miasmatic influences, and who have not been guilty of the same irregularities and excesses! The answer to this question will, we think, be found most fully and satisfactorily given in the affirmative in the correspondence before us.

In a letter, dated November 21st, Sir W. Burnett says:—"I do not mean to deny the possibility of this or any other fever becoming infectious under such circumstances as attended that in the Eclair; but there is not the least proof that it was so, while there are circumstances and proofs that inevitably lead to a contrary conclusion. But be this as it may, I have no hesitation in declaring my firm belief, that the sick men of the Eclair, when that ship arrived at the Motherbank, might have been landed at Haslar hospital, and placed in the well-ventilated wards of the establishment, without the public health suffering in the smallest degree."

---

* See vol. xxxvii. p. 1042.

We need hardly say that the facts already quoted are strongly adverse to the opinion here expressed: and some others detailed in this correspondence, show that the Director-General had allowed his judgment to be influenced by his own peculiar views on the subject. There is no doubt that a fever, not originally of a contagious nature, may become so when the sick are crowded together in a small and ill-ventilated place. To this cause, Sir W. Burnett, in his letter of October 7th, refers the attack of Dr. M'Clure, a passenger in the Growler, who it will be remembered volunteered his services, and was appointed supernumerary surgeon to the Eclair.

Let us follow out the facts of the Report. According to Mr. Maconchy, the surgeon of the Eclair, the vessel arrived at Boa Vista on the 28th August, landed the sick at a small fort on a detached island, part of whom were accommodated in the fort, and part in tents. The healthy part of the crew were employed in clearing out the holds of the Eclair, which were found perfectly *clean*. On the 7th of September Dr. M'Clure undertook the charge of the sick. Captain Buckle, the commander of the ship in which Dr. M'Clure was a passenger, and who was therefore likely to be fully acquainted with the whole of the proceedings, says, that this gentleman "went from the Growler to attend the sick at the fort on the 8th of September, and was taken ill on the 13th, having gone on board the Eclair for the first time only on the previous day, the sick being then re-embarked: consequently, it may be concluded that he contracted the fever while attending the sick in the fort, though it was well ventilated, and most of them were under tents, with a fresh trade wind blowing."

We do not see how, without greatly straining language to serve an hypothesis, it can be said that the attack, which proved fatal to Dr. M'Clure, could be here referred merely to intercourse with sick persons crowded together in a small *ill-ventilated* place. On the contrary, we learn that the ship had been thoroughly fumigated, cooled, and watered, and the holds are stated to have been found perfectly clean. Dr. M'Clure either took the infection in the vessel, or among the sick on shore; if the former view be admitted, the facts show that something more than the hypothesis of bad ventilation is required to explain it, and there would be a full justification for keeping such a ship in strict quarantine: if the latter opinion be adopted,—and this, we confess, appears to us much the more probable, considering the occurrences which have taken place in Boa Vista since the departure of the Eclair,—then it follows that the disease must have been of a virulently contagious kind even under the most perfect ventilation.

Our readers will judge from these extracts and remarks that the preponderance of the evidence is most decidedly in favour of the view taken by Sir W. Pym. It appears to us that the infectious or non-infectious nature of the disease in the Eclair has been on this occasion brought to a complete test, and finally settled in the affirmative. Our consul in the Cape Verde islands had no particular hypothesis to serve: he was a mere observer of facts, and he drew those practical conclusions from what was passing before his eyes, which any man of unbiassed judgment would have been compelled to draw. The lamentable results which followed the partial intercourse permitted to the Eclair, even made converts of the Portuguese practitioners, who in the first instance denied the contagious nature of the disease. Four medical men, Mr. Maconchy, Dr. Kenny, through whose advice intercourse was allowed, Dr. M'Clure, and Mr. Sidney Bernard, successively fell victims. Dr. Kenny's opinion, that it was the *simple* African coast fever, may be regarded as having mainly led to the sacrifice of at least four hundred lives: and we have now only to congratulate ourselves that Dr. Kenny's view was not acted upon in this country, or the results might have been most ruinous to the public health.

It may be said that the fever was not likely to spread over the British islands, owing to the temperature of the climate being much lower than that of the Cape Verde islands. To this we shall reply, that the malignant character of the disease on our shores was made sufficiently manifest even in the few cases of those individuals who had intercourse with the sick: and after the experience of the Asiatic cholera, which, before its appearance in Europe, according to some medical prophets, could never spread in a cold climate, we are inclined to put but little faith in *à priori* opinions of this kind. They are based upon the assumption that we are perfectly acquainted with all the causes which lead to the diffusion of epidemic and contagious diseases, whereas the correspondence on the Eclair will show that even experienced men have yet much to learn upon this subject. In the meantime, we must protest against the acquisition of this experience by those who are still sceptical, at a possible risk to the lives of thousands. The alternative is too serious to contemplate.

We have now only to profit by the lesson we have derived from observing the effects which followed the abandonment of all restrictive precautions at Bona Vista. It is quite possible, as Sir W. Burnett observes, that ships may, before this, have arrived in *our* harbours from the coast of Africa, having lost the whole or the greater part of their crew by the fever of the country,—that in others, men still labouring under fever, may have been transferred to an hospital, on their arrival, without the disease spreading;—but this neither satisfies us of the identity of the fever with that which existed in the Eclair, nor of the propriety of admitting to free intercourse, the crew of a vessel in which so malignant a disease is proved to have existed. The Portuguese governor of Bona Vista was probably influenced by this view, when he allowed the vessel to have intercourse with the island; since, probably, notwithstanding the frequent arrival there of ships from the coast of Africa, the disease had not before spread or cut off a large proportion of the population of the island! He has now paid dearly for his experience, and we will venture to predict that on the arrival of another "Eclair," he will be very cautious in listening to, or acting upon, medical theories regarding the varieties of fever, and their infectious or non-infectious characters.

The case of the Eclair shows that a most formidable and contagious disease, whatever name we may please to give it, may, by the rapidity of steam communication, be brought close home to our shores; and the danger, as Sir W.

Pym remarks, is likely to be aggravated when the vessel arrives during the hot season. Some precautions, therefore, are required. Means for isolating the sick should be provided at all those places where vessels engaged in the African trade are likely to touch. Medical assistance, we are assured, will never be wanting. While we thus take proper care of those who are suffering from a dire disease, we shall not, by the adoption of this plan, be exposing to any risk the health of the community. On the other hand the transference of individuals thus affected to hospitals, where numerous patients are congregated, while it cannot add to the benefit of the former, may seriously endanger the health and lives not merely of the inmates of the hospital, but of a large proportion of the population*.

EXTEMPORANEOUS PREPARATION OF LITHARGE PLASTER.

CIRCUMSTANCES may arise, particularly in districts remote from cities, in which the Apothecary's stock of litharge plaster may be exhausted just at the time when it is most needed. At such a time the value of the following formula may be proved. Take a pound of common white soap; scrape it fine, and pour on it a pint of cold water; then set it beside the fire, until it forms a jelly: dissolve half a pound of sugar of lead in another pint of water, and mix the solution with the jelly of soap, by brisk agitation: then separate the precipitat, and express it strongly. By the foregoing process you attain a lead plaster identical in composition with the litharge plaster of the shops, but white, and more brittle. You can, however, make it in every respect equal to ordinary litharge plaster, by melting and mixing with a few drops of spermaceti oil. The materials for preparing this form of litharge plaster are to be obtained in every village; it requires no delicacy of manipulalation for its preparation, and it will answer perfectly for making soap plaster, adhesive plaster, &c."—*Dublin Hospital Gazette.*

Reviews.

Remarks on the Dysentery and Hepatitis of India. By. E. A. PARKES, M.B. Late Assistant-Surgeon, H.M. 84th Regiment. 8vo. pp. 271. London: Longman and Co. 1846.

NOTWITHSTANDING the fact that none of our licensing medical bodies have ever adopted the requisite means of insuring a competent knowledge of morbid anatomy in those who offer themselves as candidates for their diplomas, this invaluable science has, during the last twenty years, received continual additions from hosts of inquirers, who have been led on to discovery by a strong conviction of the importance which attaches to pathological research, as well as by the eager interest which the development of great and interesting facts ever excites in the minds of those who delight in science for its own sake. It would, in the present day, be difficult to meet with a well-informed medical man who is incapable of testing his diagnosis, and extending his knowledge, by anatomical examination; and, fortunately, it would now be almost equally difficult to point out any extensive district in the British dominions which does not contain gentlemen thus qualified. Surgeons and physicians practising in remote parts of our own country, and in distant colonies, now engage successfully in those researches which, in former times, none but learned professors and medical schoolmen ever dreamt of undertaking; and the consequence of this extended labour unquestionably is, the storing up of an immense accumulation of valuable facts, all tending more or less to assist in the two great objects of medical study—the mitigation of physical suffering, and the prolongation of life. The only difficulty now is to meet with those who are fully capable of arranging the facts which the profession is daily collecting.

Nearly the whole of the knowledge which we possess of the diseases of tropical climates has been furnished by surgeons connected with the public services; but it is long since we have met with any work of research published by a military surgeon which has satisfied us more than this. Dr. Parkes' remarks are evidently the results of actual and accurate observation, commenced with no small amount of sound knowledge, and conducted in the right direction; the facts which have resulted from his inquiry are highly interesting; they bear upon those parts of the history of hepatitis and dysentery which required elucidation, and they are stated with great method and clearness. We shall give a brief analysis of Dr. Parkes' views, but shall be the less anxious to render it complete, that the reader may be induced to study the subject from the original treatise.

---

* Since the above was written, we find that a vessel, the Albatross, has just arrived at Spithead from the West Coast of Africa Station, on which she has been during the last four years. She came up with the yellow flag, but, having no malignant disease on board, was speedily admitted to pratique. This, at any rate, shows that, in England, the Quarantine laws are not put in force, except in cases which imperatively demand their enforcement.

In his preface, the author makes a very just allusion to what he terms the "composite nature" of all chronic abdominal diseases. He considers that before long a different mode of describing the allied abdominal diseases will be necessitated by increasing knowledge. Then it will be found, that each disease, when fully formed, is but a developed and prominent part of a more general but partially latent affection. He is fully prepared to say, that a chronic affection of an abdominal organ never remains simple—an opinion in which our observation enables us most fully to coincide. A clear definiton and correlation of the diseased states which complicate the dysentery and hepatitis of the East, has long been required for the due understanding of the pathology of those affections; and, although many interesting hints have been thrown out upon this point by Annesley, Johnson, Twining, Budd, and others, we think that the explanation has been approached more nearly by Dr. Parkes than by any of his predecessors.

The author's observations were made on Europeans and Asiatics. He has dissected about fifty cases of acute dysentery fatal in Europeans, and about twenty cases fatal in Asiatics. He has dissected, also, about twenty-four cases of hepatic abscess, in the majority of which dysentery was present.

Admitting the inflammatory nature of dysentery, the author is convinced that it is not from the severity of inflammation that ulceration of the large intestines is so rapidly and so constantly produced.

He has observed that the earliest morbid changes which occur in dysentery are inflammation and ulceration of a set of solitary glands which exists on (in?) the inner coat of the large intestines. The ulceration begins in three ways: in the glands themselves; around the glands; by effusion of a fluid beneath intermediate mucous membrane. For the sake of convenience, he makes the following arrangement of the stages of simple dysentery unattended by sloughing.

> "First period. — Of enlargement, and commencing ulceration of solitary glands.
>
> "Second period. — Of complete and spreading ulceration.
>
> "Third period.—Of cicatrization.
>
> Fourth period. — Of abortive cicatrization, commonly called chronic dysentery, a disease which is a resultant of continued subacute inflammation and ulceration, combined with ineffectual efforts to produce the usual cicatrizing process.
>
> "Dysentery, when it does not prove fatal, either becomes chronic, or the ulcers heal. The healing process is peculiar, and takes place with great readiness, so that an ulcer which to-day is extending itself and pouring out blood, to-morrow will be completely cured, that is to say, lymph is effused over its whole surface in layers, preventing the flow of blood, and arresting the progress of the ulceration."

The process of cicatrization is peculiar, and the term "granulation" has been incorrectly applied to denote the mode in which it takes place. Judging from analogy, we have no doubt that the author's view is correct: granulation is certainly not the process by which lesions of mucous membrane are usually repaired.

> "After a certain time, in dysentery, when the inflammation has diminished, lymph begins to be effused over the surface of the ulcer, and between the muscular fibres, if these form its floor. In an ulcer disposed to heal, the lymph is regularly diffused over the surface, forming a gelatinous-looking coating, which becomes gradually darker in colour, rises to a level with the edges of the ulcer and the surrounding membrane, and then slowly contracts, puckering to a greater or less extent the adjacent mucous membrane."

In most cases, however, the process is less regular than this.

> "In a number of cases, either from severity of attack, from neglect, or from inefficient treatment, fibrine is deposited in immense quantity upon and between the coats of the intestine. This forms the disease called 'chronic dysentery,' which

not, as stated by some, merely unhealed ulcers, but a resultant from these, and from a mis-direction of the usual process of cure. A stage beyond this, when the ulcers are all healed, presents merely a thickening of the coats, and diminution, partial or universal, of the calibre of the colon and rectum. No ulcers can be seen in this case, and often all traces even of their cicatrices have disappeared. A common result of chronic dysentery is a stricture of intestine from contraction of the effused lymph."

The following is a brief summary of the appearances discovered in the large intestine in fatal cases of dysentery, where death occurs during the earlier stages of the disease.

"First period.—Enlargement of solitary glands, vascularity at their bases, ulceration at their apices, or over the whole surface; afterwards small ulcers, generally round, with raised or flat edges, distinct, or running into irregular confluent ulcers. Intermediate mucous membrane natural, or as a variety inflamed, thickened, and a little softened."

"Second period. — Of complete and spreading ulceration. Is characterised by the existence of ulcers of various shapes, sizes, and degrees of development: round, oblong, or irregular: if round, often with raised edges; if irregular, with flat and levelled edges, the floors formed either by the muscular fibres, compressed by effusion of lymph among them, or by the serous coat, or by a false membrane of various thickness, effused upon either the serous or muscular coats. In colour, ulcers pale, reddish, or in a more advanced stage blackly striated; surrounding and intermediate mucous membrane natural, reddened, softened, or at a later period thickened, as well as other coats, by deposition of fibrine; in most instances deposition of lymph upon ulcers in small points in rounded soft nodules, or in layers.

"*Appearances in other organs.*—The cerebral and thoracic organs are never implicated in simple acute dysentery, and incidental changes in them need not be detailed."

The chief changes in the other abdominal organs are arranged by the author in a tabular view of twenty-five cases. It results from these cases. —That in 1 out of 25 cases of dysentery dying, in the acute or sub-acute stage, abscess is found in the liver. If, however, from these 25 cases we take 2, in which it was doubtful whether the abscess was not a latent primary one, it leaves us 5 out of 23. Add to these 39 cases published by Dr. Tunes, among which were 7 cases in which hepatic abscess was found, and we get 13 cases of hepatic abscess for 61 cases, or about 21 per cent. in patients dying in the acute stage.

"The state of the liver, where there is no suppuration, varies. It is often pale, bloodless, slightly granular, or merely pale and small. It was so in 6 cases out of 25.

"Sometimes it is granular and enlarged; but generally here also pale, and containing blood only in large vessels. It was so in 4 cases out of 25.

"In 5 cases out of 25 it was enlarged, dark, and congested, exuding blood on section.

"In 3 cases it was natural, or at least no alteration in its structure could be seen by the naked eye. The most common change is the pale granular appearance."

With regard to the state of the bile, it is sometimes thin and transparent, at others thick, dark-green, very stringy and viscid. In the latter cases it happened that the patients had been treated on the salivation plan. It is evident that in many cases of dysentery the secreting function of the liver is temporarily suspended.

In acute dysentery the author has not observed any lesions either of the Pancreas, Spleen, or Kidneys. In chronic dysentery, the former organ appears to suffer more.

The Gastro-Enteric Membrane is healthy: in all cases of simple dysentery the alterations in the canal are circumscribed by the ilio-colic valve.

The author's information respecting the condition of the stools in the several stages of dysentery (p. 51), is very explicit, and this portion of the work, as well as the succeeding pages upon the general symptoms of the disease, are especially worthy of attention.

In a late review* we discussed an interesting question respecting the origin of the hepatic suppuration which has been found to co-exist with dysenteric ulceration of the intestine and other parts connected with the portal system of veins, in a considerable proportion of the fatal cases. The following are a portion of the arguments adduced by Dr. Parkes in illustration of this subject.

"I have carefully dissected ten cases of secondary hepatic abscess, and several others, in which the dysentery and hepatitis appeared coetaneous.

---

* Review of Dr. Budd's Treatise on Disease of the Liver.

"1. As ulcers exist in every case of common dysentery, and abscess only follows in some cases, the absorption of pus cannot be the true cause of production of the abscess, as stated by some writers: besides, in certain cases, the ulcers in intestines, in secondary hepatic abscess, although very numerous, are small, and are in their earliest stage.

"2. I have carefully looked out for venous inflammation, and am certain that in many cases there is no process of this kind going on."

We do not conceive that the above question is argued with the author's usual skill; although, if received, his views would tend to corroborate the opinion which we supported in our notice of Dr. Budd's work; viz. that the hepatitis depends, in these cases, not upon the absorption of pus by the portal veins, but upon a tendency to hepatic disease originating from the same constitutional causes which occasioned the dysenteric affection. But it is as illogical to state that, in these cases, the absorption of pus cannot be the true cause of the hepatic abscess, merely because ulcers exist in every instance, while abscess is only an occasional occurrence, as it would be to argue that certain of the deaths which follow amputation must be altogether independent of purulent absorption, because more or less suppuration occurs in every stump, whatever the issue of the case may be. For it is evident, with regard to both classes of cases, that, in certain individuals, phlebitis of an unhealthy kind may occur, which, not being attended with the deposition of adhesive matter in the veins, may lead to the introduction of purulent matter into the circulation: while in the generality of instances, the veins impinging upon the seat of lesion, merely undergo obliteration by a healthy process. The author's objection, that he has failed to discover the traces of venous inflammation in these cases, is of very doubtful validity, as it is believed that purulent absorption may result from the implication of exceedingly minute venous branches — the larger trunks of the vessels remaining free from the evidences of phlebitis.

We still doubt the absorption of pus in these cases, but upon other grounds than those adduced by the author. We conceive that the comparative length of the period which dysenteric patients not unfrequently survive the occurrence of hepatic abscess, and the absence not only of suppuration in the lungs and other organs, but also of a great variety of symptoms and lesions which are believed characteristic to the circulation of purulent matter in the system—are the principal facts which should be adduced in opposition to this view. But to turn to the author's remarks:—

"3. If the abscess be owing to spreading of inflammation by contact, it ought always to be situated at the point nearest to the inflamed colon; but this is by no means the case.

"The mesenteric glands are enlarged and inflamed in all cases of dysentery; but,

"4. I have never seen any suppuration of them in secondary hepatic abscess.

"In all the cases I have examined, the duodenum was free from disease, if we except an enlargement of the solitary glands generally, and of the orifices of Brunner's glands."

The fact that the hepatic secretion is in many of these cases, suppressed, proves that the existence of an immense quantity of vitiated bile is not generally an agent in the production of this kind of abscess.

The author concurs in the view of Dr. Copland, who argues that "this form of complication is evidently caused by the sudden cessation of the dysenteric affection, which being very intimately dependent on the excretion of morbid matters from the circulation, and the economy in general, cannot be very abruptly suppressed, without inducing continued or remitting fever; or inflammation, congestion, or enlargement of excreting organs."

"It is a singular circumstance that among the Gentoos, Hindoos, and Mussulmans of the South of India, hepatic abscess is uncommon."

Although we have merely given a very slight sketch of the author's views, we have given so much space to the pathology of dysentery that we can devote but little to the author's observations respecting the *treatment* of this disease, and of the morbid states which frequently accompany it, but this will be the more readily excused, as it is the plan usually adopted by the pathological writers of the present day.

"The indications of treatment (observes the author) are, I conceive, fully evident.

"1st. To subdue the inflammation of the solitary glands and of the ulcers, where these are formed, as is always the case after the first few days.

"2d. To assist the healing of the ulcers, when the ulceration has been arrested.

"The essential measures in the early stage of common acute dysentery have been stated to be:—

"1st. Very free depletion, to arrest the progress of an acute inflammation.

"2d. Oleaginous purgatives, with opium, to remove secretions.

"3d. Opium to allay tormina, and diminish the excess of nervous sensibility, which is one link in the inflammatory process; the combination of blue pill and ipecacuanha with the opium seems to increase its powers.

"4th. Occasional production of salivation."

The above affords a very slight and imperfect sketch of the treatment as recommended by Dr. Parkes,—a subject upon which he dwells at great length, and with much judgment.

For the many other valuable facts which his treatise contains, we refer our readers to the original work, which we do not hesitate to characterise as a most important addition to the history of tropical diseases. It should be possessed by every medical man practising in India; and may be perused, with much advantage, by the European physician, especially when taken in connexion with Dr. Budd's recent work on Diseases of the Liver.

MODE OF KEEPING PLUMMER'S PILLS.

These pills (pilulæ hydrargyri chloridi compositæ) ought never to be kept in mass; when the materials are kept mixed in a moist state, mutual decomposition takes place between the calomel and the brown sulphuret of mercury, chloro-sulphuret of antimony and sulphuret of mercury being formed. The powders should therefore be always kept mixed in the dry state, and when the pills are wanted, the mixture may be massed by means of a few drops of spirits of wine. It is well to recollect, however, that two parts of the mixed and dry powders are equal in strength to three parts of the pill mass; and the compounder, therefore, to fulfil the intentions of the prescriber, should employ of the dry powders but two-thirds of the quantity of pill mass ordered."—*Dublin Hospital Gazette.*

Proceedings of Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

June 23.

Dr. Chambers in the Chair.

On the Internal Structure of the Human Kidney, and all the changes which its several compound parts undergo in Bright's Disease. By Joseph Toynbee, Esq. Senior Surgeon to St. George's and James' General Dispensary.

This paper contains the result of the author's researches into the structure and into the nature of Bright's disease of the kidney, since 1838. During between two and three years he was engaged in pursuing investigations in conjunction with Dr. Bright, but as a variety of circumstances prevented the publication of a work, the result of their joint labours, the author details but the principal facts which have been elicited. Feeling how much is due to the assistance and co-operation of Dr. Bright, at whose expense the greater part of the extended series of drawings elucidating the paper were made, the author states, that it is not without some degree of diffidence that he prefixes his name to the communication.

In the division of the paper on the "Anatomy of the Kidney," the author successively describes minutely the result of this examination into the parenchyma, the tubuli uriniferi, the arteries, veins, and nerves of the organ, in each of which departments views are advanced varying considerably from those of modern and former anatomists.

In the pathological observations, the author adheres to the opinion advanced by Dr. Bright, and lately so ably advocated by Dr. G. Robinson, that a congested condition of the organ precedes the important changes which subsequently occur in the three stages of disease. The author then proceeds to demonstrate that the arteries first become diseased, and that the tubuli, veins, and parenchyma of the organ follow.

The three stages of the disease are illustrated by an elaborate series of drawings, in which the various successive changes are indicated, and the paper concludes by pointing to the various plans which should be carried out for the prevention of this disease, at present so formidable in all classes of society.

Dr. C. J. B. Williams said that at that late period of the evening and of the session he would not intrude long on the attention of the Society; but before noticing the subject of the last paper, he could not be express his regret at the *embarras de richesses* with which they had been overwhelmed to-night; almost each one of the interesting papers, of which only either abstracts or the titles had been read, might have afforded a sufficient scope for an evening's digestion and discussion; as it was (no doubt unavoidably) the subjects were scarcely intelligible, and the valuable pathological drawings and specimens were rendered useless.

This last paper treated of a most important subject; and admitting as he did the great value of Mr. Toynbee's researches, he would not lose the opportunity of expressing dissent from the concurrence which Mr. Toynbee expressed with the views of Dr. Johnson, as conveyed in a paper read at the commencement of the session. He (Dr. Williams) not only did not consider that fatty deposit in the kidney to be the first stage of Bright's disease, but he could not admit that it is an essential part of the disease at all. Further, he would state as the result of careful microscopic investigation by Dr. Richard Quain, confirmed by his own examination of numerous specimens, that the deposit in this disease is not confined to the uriniferous tubes, but appears on their exterior in the interstices between the vessels. This corresponds with the views which he had long held and published on the subject, that the deposit consists of albuminous matter like that effused from vessels affected with inflammation or a certain amount of congestion, and may, like such fibrinous effusions, present considerable varieties in its mechanical and chemical condition. This deposit mostly consists of granular matter; but the granules in one case are contained in cells, resembling exudation corpuscles rather than the proper epithelium cells of the uriniferous tubes, and are seen without the tubes as well as within them, and therefore cannot be a multiplication of these cells. The distinction may be further seen on contrasting a healthy kidney with one diseased; but here he begged to observe, that it is a rare thing to find a perfectly healthy kidney in the dead body in this metropolis. A change of structure, the extreme of which constitutes Bright's disease, is in slight degrees exhibited in a large majority of the kidneys of adults examined in hospitals. But if we contrast the healthy kidney of a young subject, we see in its beautifully regular, oval, nucleated epithelial cells, an appearance quite different from the large round granular cells which stuff the tubes, and block up the parenchyma in the early stages of Bright's disease. It is this stuffing and obstructing that interrupts the function of the kidney, and eventually alters its structure. In the more advanced forms of the disease, the granular matter is seen without its cell walls, and sometimes interwoven with filamentous tissue. The facts which he (Dr. Williams) would adduce against the notion, that the deposit is of a fatty nature, are derived from its optical and its chemical properties. Although, occasionally, fat globules in considerable numbers may be seen in it, this is an exception rather than the rule. The granular matter, in most instances, is far less refractive than oil globules are; such, for example, as are commonly seen in the cells of the liver, as may be made obvious by comparing them in the same field. The chemical reaction of the matter also differs from that of fat, for the granules resist the action of caustic potash and of æther, separate or combined, whereas acetic acid partially dissolves them, a fact mentioned in the abstract of Mr. Busk's paper read to-night. He (Dr. Williams) was aware that Mr. Gulliver and others entertained the opinion that the molecular base of all nucleated cells is of a fatty nature, but that was a subject foreign to the present question, which was, whether or not the morbid deposit in Bright's disease is chiefly fat, like that in fatty degeneration of the liver. This question he would answer in the negative, and conclude, by the additional argument, that it is by no means low in specific gravity.

MANCHESTER PATHOLOGICAL SOCIETY.

June 4th, 1846.

Microscopical Pathology—Use of the Microscope in the Diagnosis of Disease of the Lungs.

Dr. Watts presented a portion of expectorated lung, three grains in weight, and illustrated the minute anatomy of this interesting preparation by a drawing of the contractile fibres of the pulmonary parenchyma; magnified 300 linears.

He had frequently found small particles of tuberculous lung in sputa with the aid of the microscope in other cases, and had sometimes discovered the existence of tubercular cavity by this means, but the specimen exhibited was very much larger than any fragment of expectorated lung he had hitherto met with. It enabled him to form a correct opinion in this peculiarly obscure case, in which it would otherwise have been difficult to say whether the disease of the lung was mere induration, or induration together with tubercles, or apoplectic induration, or a tubercular cavity, or simply an abscess. The investigation of the sputum with the microscope, however, made the existence of a cavity a matter of certainty; and with a diagnosis so exact, there remained very little doubt respecting the prognosis.

The patient, an athletic man, of very

intemperate habits, aged 32 years, came under treatment for pleurisy and effusion into the right pleural sac. After the absorption of the effused fluid, bronchial respiration and bronchophony were heard in lieu of vesicular respiration at the back of the inferior lobe of the right lung, close by the spine; and there was dulness on percussion over this part. The respiratory murmur was elsewhere correct; and, with the exception of a slight sibilus, there was no morbid sound in any other part of either lung. He expectorated much white slimy pus, of peculiarly sickening odour. There was neither emaciation nor hectic sweating; pulse 80, regular.

The patient had been suddenly seized fourteen months previous with pain in the right side, followed by cough; and in the third, seventh, and eleventh months after this attack, he spat up as much as a gill of blood; but on the last occasion it was mixed with expectoration, exhaling a most offensive and disgusting odour. He continued afterwards to expectorate sputa of variable description until he consulted Dr. Watts; the expectoration, however, having gradually become less and less offensive.

General Œdema, or Dropsy of the Liver.

Dr. Francis exhibited a specimen of general œdema, or dropsy of the liver, which, from the silence of Dr. Budd and some other authorities, which he had consulted upon the subject, he was induced to think had not received prominent notice.

The liver possessed the following characters. The whole organ was very considerably enlarged, of a brownish-fawn colour; its anterior margin rounded and thickened, but without peritoneal thickening or opacity. Upon pressure it pitted, after the manner of anasarcous limbs, although less decidedly. On section the same general colour was observed, and a large quantity of a brownish watery fluid escaped, but little or no blood.

The lobules were enlarged to double their usual size, and were remarkably distinct; they were semi-transparent, resembling in this respect ordinary cellular tissue when infiltrated with serum; they were surrounded by a very distinct and complete whitish-yellow circle, which appeared to be the portal or interlobular vein, thickened and whitened by maceration in fluid, and in their centres the hepatic veinlets had apparently undergone the same change.

After protracted gentle compression the lobuli lost their distinctness, size, and semi-transparency, upon the escape of abundant fluid as limpid as ordinary, serous effusion, and only slightly tinged reddish-brown, and now presented more of the characters of ordinary liver structure.

The lobuli underwent the same reduction in size upon the addition to them of dry salt, which exhausted their fluid, and clearly proved that their enlargement was not due to a solid deposit.

Every portion of the liver appeared to have undergone, to an equal extent, the changes described above, nor did careful examination discover any other appreciable disease in the organ.

The gall-bladder contained about 2 drachms of pale fluid, little else than mucus tinged brown.

The patient was a man 50 years old. The kidneys were specimens of far advanced Bright's disease, and the dropsy of the liver was viewed as one of the results of the morbid condition of blood in connection therewith.

Ulcerated Carcinoma of the Uterus.

Dr. Renaud presented a specimen of ulcerated carcinoma of the uterus, from the body of a woman 54 years of age.

The disease had existed fifteen months, and its commencement bore date 6½ years subsequent to the catamenial decline, which happened without inconvenience or suffering. Attention was directed to the large size of the organ, which measured 6 inches in length, was 1½ inch in thickness at the parts most altered by the disease. The fundus was distended with an ounce of grumous blood. The greater part of the body of the uterus, as well as the cervix, was infiltrated with the disease, which exhibited well the property of cancerous growths to decrease in density.

The left ovary was closely attached to the body of the uterus, and one half of this gland had become transformed into cancer matter, affording a good illustration of the disease spreading by simple contiguity.

The softening had taken place by the true inflammatory process, as was proved by the microscope; the cancer cells in these parts being broken down, and the whole substance thickly interspersed with the true inflammatory aggregation globule.

A microscopical examination of this diseased mass in its various parts appeared to add additional confirmation to the opinion already advanced, that the cancer cell in many cases is round in its early development; those cells in the ovary, which was a part last attacked by the disease, being in many instances globular, or in the act of shooting out the characteristic tail-like prolongations; whilst in the body of the uterus, where the cancer matter was not yet disintegrated, the long caudate appendages, and the large size and full growth of cell, was everywhere most apparent.

Ruptured Chordæ Tendineæ of the Mitral Valve.

Dr. Charles Bell exhibited a specimen of rupture of the chordæ tendineæ of the mitral valve, in which the ruptured ends of the tendons were expanded into tubers of lymph and calcareous deposit of the size of lupin seeds.

There was very slight beading on the edge of this valve, and on the chordæ next to the ruptured tendon, which rendered it probable that the part where rupture had taken place had been similarly affected. The heart was enlarged, but otherwise perfectly healthy, and was wholly without signs of recent inflammation.

The girl, æt. 24, had suffered from acute rheumatism four years ago, and the recovery appeared complete.

In September last she had catarrh, and the chest was carefully examined. She was then chlorotic, and subject to occasional fits of palpitation of the heart, but no bellows-murmur existed.

In March, without any relapse of rheumatism, the palpitation suddenly increased, with pain and extreme breathlessness, so that she was obliged to leave her work. The impulse of the heart was found violent and rapid, and a very loud roaring bellows sound proceeded from the mitral valve. She experienced little relief from treatment, but while under the influence of calomel and opium she voided a large tænia (solium). She died dropsical on the 28th of April.

Dr. Bell attributed the rupture here to the sympathetic palpitation produced by the presence of tapeworm in the intestines, acting on a heart previously enfeebled by inflammation of ancient date; and he considered the case important as showing how extremely guarded prognosis ought to be in all cases of endocarditis, even where the disease appears to have been most successfully combated, and as proving that a lesion to a valve so slight as to be recognizable by no sounds, and which might possibly even have escaped observation on dissection, may yet render the patient liable to the most distressing and fatal effects from mere nervously excited action, unaccompanied by any recurrence of acute disease.

Hospital and Infirmary Reports.

UNIVERSITY COLLEGE HOSPITAL.

A Case of Ichthyosis fortuita, treated with the Decoction of the root of the Rumex obtusifolius. Clinical Remarks, by Dr. A. T. Thomson. [Communicated by Septimus Lowe, Esq., M.R.C.S.L.]

James W——, aged 15, was admitted into University College Hospital, under Dr. Thomson, June 2d, 1846. He is of the ordinary stature; of sanguine temperament, slight conformation, and moderately florid complexion. He has been at school, but has never had any other occupation. His food has consisted principally of bread and butter, with tea and potatoes. He has seldom had any meat, or malt liquor, or spirits. His clothing has been poor and scanty. He has generally wandered about, when he was from school, without shoes or stockings. He has commonly slept soundly for eleven hours every night, and in a dry room, but with few bed-clothes. His natural disposition is cheerful, He has always lived in London, in a damp, confined, dirty, unwholesome situation. His parents are alive and healthy; they have never been affected with any skin disease, nor have any of their relatives. He states that his general health has always been good, and that he has usually been much stouter and stronger than he is at present. He was run over about six years ago, which confined him to bed for some time, and soon afterwards swellings of the inguinal glands appeared, and ended in suppuration. Since that time, he has suffered from abscesses forming in the inguinal glands every summer. In the left groin there are several recent eschars; and in the right there is an unhealthy-looking ulcer, arising from an abscess which burst about a fortnight since. He is subject to ascarides, and his bowels have been irregular in their action for some time past. About two years ago he observed a roughness of the skin on and around the ankles, of a dark colour, but without pain or redness: it gradually extended up the legs, and a slighter roughness appeared on the body also, without discoloration. It soon appeared on the arms in greater quantity, and of a darker colour than on the body.

At present there appear elevations of a warty character, extending from the forearm to the scapula: the elevations are darker and more prominent over the elbows and the scapulæ. There is a thickly covered warty appearance also over the ankles and the knees; the legs and the thighs appear as if covered with mud. On the sides of the trunk, the back and the breast, the cuticle has a cross furrowed appearance, and a rough feel, but it is scarcely discolourad. The scalp is also, for the most part, covered with the same dark, warty-looking elevations as the rest of the body. The face, hands, groins, axillæ, flexures of the elbows, wrists, knees, and the soles of the feet, are free from the diseased appearance. On no part is there any redness of the skin, or pain, or heat, or itching. There are cicatrices from small abscesses on various parts of the body: the lips are red and cracked; the tongue is furred, and red at the apex, but it is moist, and the papillæ are prominent. The breath is offensive. He has no appetite. The abdomen is free from pain even on pressure, and it is not tumid. The bowels are regular. He has no symptoms of hepatic derangement. The respiratory organs, and also those of circulation, are quite natural. The pulse is 80, soft, and compressible. He has passed only three ounces of urine in twelve hours; it is high coloured, neutral, of a sp. gr. 1·030, and rather turbid, but it is cleared by heat: it contains globules, apparently fat globules and epithelium scales, when it is examined under the microscope. He has not been under any medical treatment previous to his admission into the hospital.

He was ordered to have the scalp shaved, to have a warm bath, and to take a four-grain calomel pill immediately, and an opening draught two hours afterwards, and after the operation of this the following medicine:—

℞ Pil. Hydrargyri, gr. j.; Antimonii Potassio Tartratis, gr. j.; Extracti Conii, gr. ij. ft. Pilula 8va quaque horâ sumenda.

℞ Liquoris Potassæ, ♏xx.; Solutionis Arsenicalis, ♏v.; Tincturæ Cantharidis, ♏x.; Decocti Rumicis Obtusifolii, ʒij. ft. Haust. ter quotidie sumendus.

June 4th.—The urine still the same; the bowels are open; the general appearance is already somewhat improved. The medicine to be continued.

6th.—The legs and the arms are much cleaner looking, and, where the scales are removed, the cuticle is hard, dry, and white. The bowels are regular; the urine measures 12 oz. in the twenty-four hours; its sp. gr. is 1·016. A slightly flocculent cloud floats in it, but it is free from fat globules. The tongue is slightly furred. The scalp not at all improved. The medicine to be continued.

8th.—The general health improved. The legs and arms are much better. The elevations on the scapulæ are rather darker. The bowels are regular; the urine still the same in quantity, but it is pale and cloudy. The medicine to be continued.

Dr. Thomson observed, so little was known either of the predisposing or the exciting causes of this singular disease, that the history of the previous and general habits of the patient were of the utmost importance. In this case the general condition of the habit was that of debility, most probably arising from the poor and scanty food, as well as the external deleterious influences, which from the locality of the patient acted upon the constitution, and more particularly upon the skin. This form of the disease was that which Dr. Thomson ventured to call *ichthyosis fortuita*, as it is not hereditary, and might occur in children of the most healthy parents. There was another form of ichthyosis, which, according to Bateman and Willan, appeared in early infancy; namely, *ichthyosis innata*, and which was always hereditary. The account of the general good health of the patient was not to be altogether relied upon; for he must have been always strumous, and the confinement consequent upon the accident he met with six years ago would have called forth the glandular disease, under which he was now suffering. No information was here obtained of the origin of the present attack, nor whether it was preceded by any constitutional disturbance. The disease was sometimes ushered in by headache, cold feet, flushed face, and disordered bowels. A mild form of it was not uncommonly seen in strumous children, having a high colour, and a thin clear skin; and in these cases it often only amounted to a mere partial roughness of the skin. The parts of the body mentioned in the report, as being free from the disease, were those most commonly unaffected, and the most perspirable parts. Its absence there seemed to demonstrate that a great deal might depend upon defective action of the capillaries of the skin. The scalp was seldom affected, although it was particularly so in this case. The roughness undoubtedly depended upon elongated diseased papillæ, but the real seat of the disease was the exterior layer of the cutis vera, that which secretes the epidermis. It might be asked, was it the result of increased or diminished action in the capillaries? This was an extremely difficult query to answer, for increased action might produce a hasty and imperfect secretion, but not such as favours this disease; and a retarded secretion might exist without the formation of such diseased papillæ. We find that the most perspirable parts of the skin are free from eruption, and in these the capillary action was the most active. What the real nature of the action, however, might be, had yet to be determined; and until that was clearly established, we could not hope to treat the disease on fixed principles. The cuticular elevations can scarcely be called an eruption, since they are merely diseased papillæ. They are removable by maceration, because they possess little or no vitality, and the horny part may be considered as the old papillæ pushed outwards by the last formed beneath them.

Dr. Thomson considerfed that in the treatment of this case there were three indications to be fulfilled. First, to augment the action of the capillary vessels of the skin. Secondly, to improve the secretions

Ruptured Chordæ Tendineæ of the Mitral Valve.

Dr. Charles Bell exhibited a specimen of rupture of the chordæ tendineæ of the mitral valve, in which the ruptured ends of the tendons were expanded into tubers of lymph and calcareous deposit of the size of lupin seeds.

There was very slight beading on the edge of this valve, and on the chorda next to the ruptured tendon, which rendered it probable that the part where rupture had taken place had been similarly affected. The heart was enlarged, but otherwise perfectly healthy, and was wholly without signs of recent inflammation.

The girl, æt. 24, had suffered from acute rheumatism four years ago, and the recovery appeared complete.

In September last she had catarrh, and the chest was carefully examined. She was then chlorotic, and subject to occasional fits of palpitation of the heart, but no bellows-murmur existed.

In March, without any relapse of rheumatism, the palpitation suddenly increased, with pain and extreme breathlessness, so that she was obliged to leave her work. The impulse of the heart was found violent and rapid, and a very loud roaring bellows sound proceeded from the mitral valve. She experienced little relief from treatment, but while under the influence of calomel and opium she voided a large tænia (solium). She died dropsical on the 28th of April.

Dr. Bell attributed the rupture here to the sympathetic palpitation produced by the presence of tapeworm in the intestines, acting on a heart previously enfeebled by inflammation of ancient date; and he considered the case important as showing how extremely guarded prognosis ought to be in all cases of endocarditis, even where the disease appears to have been most successfully combated, and as proving that a lesion to a valve so slight as to be recognizable by no sounds, and which might possibly even have escaped observation on dissection, may yet render the patient liable to the most distressing and fatal effects from mere nervously excited action, unaccompanied by any recurrence of acute disease.

Hospital and Infirmary Reports.

UNIVERSITY COLLEGE HOSPITAL.

A Case of Ichthyosis fortuita, treated with the Decoction of the root of the Rumex obtusifolius. Clinical Remarks, by Dr. A. T. Thomson. [Communicated by Septimus Lowe, Esq., M.R.C.S.L.]

James W——, aged 15, was admitted into University College Hospital, under Dr. Thomson, June 2d, 1846. He is of the ordinary stature; of sanguine temperament, slight conformation, and moderately florid complexion. He has been at school, but has never had any other occupation. His food has consisted principally of bread and butter, with tea and potatoes. He has seldom had any meat, or malt liquor, or spirits. His clothing has been poor and scanty. He has generally wandered about, when he was from school, without shoes or stockings. He has commonly slept soundly for eleven hours every night, and in a dry room, but with few bed-clothes. His natural disposition is cheerful, He has always lived in London, in a damp, confined, dirty, unwholesome situation. His parents are alive and healthy; they have never been affected with any skin disease, nor have any of their relatives. He states that his general health has always been good, and that he has usually been much stouter and stronger than he is at present. He was run over about six years ago, which confined him to bed for some time, and soon afterwards swellings of the inguinal glands appeared, and ended in suppuration. Since that time, he has suffered from abscesses forming in the inguinal glands every summer. In the left groin there are several recent eschars; and in the right there is an unhealthy-looking ulcer, arising from an abscess which burst about a fortnight since. He is subject to ascarides, and his bowels have been irregular in their action for some time past. About two years ago he observed a roughness of the skin on and around the ankles, of a dark colour, but without pain or redness: it gradually extended up the legs, and a slighter roughness appeared on the body also, without discoloration. It soon appeared on the arms in greater quantity, and of a darker colour than on the body.

At present there appear elevations of a warty character, extending from the forearm to the scapula: the elevations are darker and more prominent over the elbows and the scapulæ. There is a thickly covered warty appearance also over the ankles and the knees; the legs and the thighs appear as if covered with mud. On the sides of the trunk, the back and the breast, the cuticle has a cross furrowed appearance, and a rough feel, but it is scarcely discoloured. The scalp is also, for the most part, covered with the same dark, warty-looking elevations as the rest of the body. The face, hands, groins, axillæ, flexures of the elbows, wrists, knees, and the soles of the feet, are free from the diseased appearance. On no part is there any redness of the skin, or pain, or heat, or itching. There are cicatrices from small abscesses on various parts of the body: the lips are red and cracked; the tongue is furred, and red at the apex, but it is moist, and the papillæ are prominent. The breath is offensive. He has no appetite. The abdomen is free from pain even on pressure, and it is not tumid. The bowels are regular. He has no symptoms of hepatic derangement. The respiratory organs, and also those of circulation, are quite natural. The pulse is 80, soft, and compressible. He has passed only three ounces of urine in twelve hours; it is high coloured, neutral, of a sp. gr. 1·030, and rather turbid, but it is cleared by heat: it contains globules, apparently fat globules and epithelium scales, when it is examined under the microscope. He has not been under any medical treatment previous to his admission into the hospital.

He was ordered to have the scalp shaved, to have a warm bath, and to take a four-grain calomel pill immediately, and an opening draught two hours afterwards, and after the operation of this the following medicine:—

℞ Pil. Hydrargyri, gr. j.; Antimonii Potassio Tartratis, gr. j.; Extracti Conii, gr. ij. ft. Pilula 8va quaque horâ sumenda.

℞ Liquoris Potassæ, ♏xx.; Solutionis Arsenicalis, ♏v.; Tincturæ Cantharidis, ♏x.; Decocti Rumicis Obtusifolii, ℥ij. ft. Haust. ter quotidie sumendus.

June 4th.—The urine still the same; the bowels are open; the general appearance is already somewhat improved. The medicine to be continued.

6th.—The legs and the arms are much cleaner looking, and, where the scales are removed, the cuticle is hard, dry, and white. The bowels are regular; the urine measures 12 oz. in the twenty-four hours; its sp. gr. is 1·016. A slightly flocculent cloud floats in it, but it is free from fat globules. The tongue is slightly furred. The scalp not at all improved. The medicine to be continued.

8th. — The general health improved. The legs and arms are much better. The elevations on the scapulæ are rather darker. The bowels are regular; the urine still the same in quantity, but it is pale and cloudy. The medicine to be continued.

Dr. Thomson observed, so little was known either of the predisposing or the exciting causes of this singular disease, that the history of the previous and general habits of the patient were of the utmost importance. In this case the general condition of the habit was that of debility, most probably arising from the poor and scanty food, as well as the external deleterious influences, which from the locality of the patient acted upon the constitution, and more particularly upon the skin. This form of the disease was that which Dr. Thomson ventured to call *ichthyosis fortuita*, as it is not hereditary, and might occur in children of the most healthy parents. There was another form of ichthyosis, which, according to Bateman and Willan, appeared in early infancy; namely, *ichthyosis innata*, and which was always hereditary. The account of the general good health of the patient was not to be altogether relied upon; for he must have been always strumous, and the confinement consequent upon the accident he met with six years ago would have called forth the glandular disease, under which he was now suffering. No information was here obtained of the origin of the present attack, nor whether it was preceded by any constitutional disturbance. The disease was sometimes ushered in by headache, cold feet, flushed face, and disordered bowels. A mild form of it was not uncommonly seen in strumous children, having a high colour, and a thin clear skin; and in these cases it often only amounted to a mere partial roughness of the skin. The parts of the body mentioned in the report, as being free from the disease, were those most commonly unaffected, and the most perspirable parts. Its absence there seemed to demonstrate that a great deal might depend upon defective action of the capillaries of the skin. The scalp was seldom affected, although it was particularly so in this case. The roughness undoubtedly depended upon elongated diseased papillæ, but the real seat of the disease was the exterior layer of the cutis vera, that which secretes the epidermis. It might be asked, was it the result of increased or diminished action in the capillaries? This was an extremely difficult query to answer, for increased action might produce a hasty and imperfect secretion, but not such as favours this disease; and a retarded secretion might exist without the formation of such diseased papillæ. We find that the most perspirable parts of the skin are free from eruption, and in these the capillary action was the most active. What the real nature of the action, however, might be, had yet to be determined; and until that was clearly established, we could not hope to treat the disease on fixed principles. The cuticular elevations can scarcely be called an eruption, since they are merely diseased papillæ. They are removable by maceration, because they possess little or no vitality, and the horny part may be considered as the old papillæ pushed outwards by the last formed beneath them.

Dr. Thomson considerfed that in the treatment of this case there were three indications to be fulfilled. First, to augment the action of the capillary vessels of the skin. Secondly, to improve the secretions generally; and thirdly, to aid the action of the general treatment on the skin, by topical means, so as to stimulate the skin and to detach the diseased papillæ from it. In order to fulfil the first indication, small doses of blue pill and tartar emetic were ordered, as the latter aided the former in its influence on the cutaneous capillaries, and increased the perspiratory function, which was evidently defective in this case. The arsenical solution and cantharides also, which were prescribed, aided this in a striking manner; and the decoction of the rumex obtusifolius was well adapted as a vehicle for these alteratives. Dr. Thomson was first led to the employment of this species of rumex in the case of a lady, who was under the care of the late Dr. Jas. Gregory of Edinburgh, and who after taking various alteratives, and even being several times salivated, and also suffering the papillæ to be shaved off, was not at all benefitted.

The case was then referred to Dr. Thomson for further advice; and, on consulting with Dr. Bateman, various alteratives were again employed for six months; among others, tar pills (each pill containing five grains), to the amount of 48 in the day, were given for the space of a month, without any obvious improvement. Dr. Thomson took the case under his own care; and after employing the various remedies generally found useful in cutaneous affections, he was at last accidentally led to administer the decoction of the rumex *obtusifolius*. When this had been taken for a fortnight, the patient was apparently cured; but on omitting the medicine, the disease returned three or four successive times, and was again cured by the reemployment of the rumex, with the arsenical solution. The habit of disease, however, appeared to be kept up; small blisters were therefore applied to the affected parts to alter the diseased action, and this, with the use of the remedies, effected a perfect cure. Since this time Dr. Thomson has employed the decoction of the rumex in several cases, and it has never failed to effect a perfect cure. After having made trial of the remedies generally recommended in this disease, and after employing the other rumices, and even tar, which is still much esteemed by many practitioners, he had never seen permanent benefit derived from any other medicine except the rumex *obtusifolius*, which he thinks might prove beneficial even if administered alone; but its action is so much assisted by the medicines previously mentioned that it should scarcely be relied upon except in combination with them.

On the continent the root of the rumex *obtusifolius* is employed by the monks as a purgative, and hence is called *Monk's rhubarb*: but if it should purge much, it would be found to be of little use in this disease. It is only when its full action upon the kidneys or the skin is obtained that it is to be relied upon. It ought therefore to be administered in the form of decoction; not in that of powder. The second indication is to be fulfilled by generous diet; and here milk would be found to answer well: vigorous exercise, sufficient to excite perspiration, should be taken in the open air. As this cannot be fully carried out during a residence in the hospital, ichthyosis is not well adapted for an hospital. In fulfilling the third indication we should employ the warm bath, with friction to the surface: the sulphur bath is found to be not more useful than the warm bath at 90°, the chief object being to soften the skin, to enable it to throw off the elevated papillæ, and to improve the perspiratory function.

The prognosis in such cases must depend, in a great measure, upon the general habit and state of health of the patient. If there is a strongly marked strumous diathesis, as in this case, it must be guarded; but, if the general health be little affected, then we may prognosticate a favourable termination. In the present case the improvement had commenced, and Dr. Thomson did not doubt that it would progress to a speedy and complete cure.

Selections from Journals.

THERAPEUTICS.

IPECACUANHA IN EMETIC DOSES, AS A POWERFUL RESTORATIVE IN SOME CASES OF EXHAUSTION AND SINKING.

In a recent number of the Gazette (May 15) we published some cases of Exhaustion from Uterine Hæmorrhage, in which Mr. Higginbottom, of Nottingham, employed ipecacuanha in emetic doses, with a favourable result; and we appended to the extract a remark, that although the remedy might prove beneficial in cases of hæmorrhage, we considered it to be by no means clearly shown that emetics and nauseants would have any other than an injurious action, in cases where exhaustion depended upon causes in which hæmorrhage or other excessive discharge had not been present. This observation was a commentary upon the following sentence in Mr. Higginbottom's remarks, and was intended to oppose the recommendation of emetics in cases of exhaustion generally, which we apprehended that sentence was intended to convey:—" The utility of ipecacuanha in uterine hæmorrhage has been proved by Dr. Osborn, of Dublin, but I am not aware that he has recommended it in extreme cases of exhaustion or sinking." The work from which the above extract was made contained only two of Mr. Higginbottom's cases; the author has since sent us the entire paper, and we therefore consider it to be due to him to quote the remainder of his cases, which are as follow:—

"*Bronchitis.*—I have found an emetic dose of ipecacuanha a very valuable remedy at that stage of bronchitis where a sudden, low, or sinking state has come on with oppression at the chest, and the expectoration difficult, endangering suffocation. Vomiting with ipecacuanha has not only soon relieved these symptoms, but has roused the whole system, and has produced such a decided change, as to render the patient convalescent in a few days. I never have seen the same good effects in such circumstances produced by any other remedy. The two following cases are of that description:—

"Mr. D——, aged sixty, an innkeeper, of a gross habit, but not considered intemperate, had been much reduced in consequence of a neglected erysipelatous inflammation of the leg and thigh; this had in some measure subsided, but he had at the same time bronchitis, attended with a troublesome cough, difficult respiration and expectoration. A sudden state of sinking came on, with increased dyspnœa, and a feeble quick pulse. I gave half a drachm of ipecacuanha in a little water; he vomited at different times for two hours; the lowness and dangerous symptoms were much relieved; he had no relapse of the low or sinking state, and he gradually recovered under a common mild treatment."

"Mrs. C——, aged seventy-eight, had an attack of the prevailing influenza; saline aperients, with diaphoretic and expectorant medicines, had been given for about five days, when a low sinking state came on, with difficulty of breathing. I was inclined to give an emetic of ipecacuanha as the most probable remedy to afford relief. I named it to her daughter, fearing the old lady would object to it. I was glad to find my patient would take it; and I may here mention the favourable idea patients sometimes have of an emetic, imagining that vomiting enables them to throw up the phlegm. I gave her half a drachm dose of ipecacuanha, which had the desired effect of completely relieving her. I was only required to visit my patient for five more days, she being then quite convalescent."

The following observation in Dr. Johnson's Review, p. 492, April, 1844, is corroborated by the above case, and I have no doubt will hold good in a variety of diseases, both in the commencement and in the sinking stage of the disease:—"The use of emetics (I would say ipecacuanha, from the great safety of its operation) is far too much neglected in the present day, and most practitioners are unnecessarily timid about using them to old patients; a single emetic will often effect more good in the course of a day or two, than other remedies in a week or two."

Case of suspended animation.—I was called about ten P.M., to visit Miss S——, aged eighteen. The messenger, her sister, informed me that she was afraid she was dying. I saw her in about ten minutes: my first impression was that she had taken poison, until assured of the contrary by her mother. She appeared in a state of asphyxia. Her extremities were cold, face livid and swollen, or the appearance of being puffed up; no pulsation at all perceptible in either wrist; her mouth was open, and her lower jaw fallen; indeed, she appeared to be dead. I ordered her feet and legs to be fomented directly with hot water by means of flannel, and a hot oven-shelf, inclosed in flannel, to be placed under the legs. I poured down her throat half a drachm of ipecacuanha in water—for she was incapable of swallowing—then I rubbed very freely the whole length of the spine with the acetum cantharides. The emetic not operating in a few minutes, I gave another half drachm of ipecacuanha, and shortly after there was a convulsive motion of the diaphragm, followed by vomiting: she ejected some very thick slimy mucus. On still rubbing the blistering vinegar along the spine, she gave signs of uneasiness in her countenance, and expressed her pain by saying "O!" I remained with her until after midnight. Before I left her, she had become generally warm throughout her body, and could speak in a very low voice, but there was no pulsation in either wrist. I prescribed a mixture with aromatic confection and camphor mixture, to be given every hour, and a little gruel, or other light nourishment, occasionally. I left particular directions to send for me if she had any unfavourable change. The following morning she was quite recovered, but very feeble; she had no recollection of her illness, and could give no account of the cause. She had been sewing during the evening, sitting with her back to the fire, had only a potato for supper, and on going out of doors into the yard, she became suddenly chill and faint, complained of pain between her shoulders, and felt very ill indeed. She then went to bed and became sick, and vomited a little watery fluid, and said she was going to die. A sudden swelling of the face came on, succeeded by a convulsive motion and stretching of the whole body; then followed the state in which I found her. No further medical treatment was required but an occasional aperient; the swelling of the face was several days in subsiding.

Sinking during the Puerperal State.—Mrs. B——, aged 23 years, very delicate, and pale complexion. I attended her in her first labour on the 12th of March ult., which was very protracted and severe, and being attacked with puerperal convulsions, I had to take about twenty ounces of blood from the arm, and found it necessary to perform embryotomy. She was exceedingly low afterwards, but gradually recovered for about eight or nine days, requiring no other medical treatment than mild aperients and injections. About the ninth day she complained of severe pains in the course of the colon, particularly at the caput coli and the sigmoid flexure. Mustard plasters were applied, and active purgatives, with benefit, but a continued vomiting came on, attended with considerable lowness. Dr. Hutchinson was called in to visit her with me. Injections of half a pint of beef-broth with half an ounce of spirit of turpentine were administered every four hours; a common blister of cantharides was applied to the scrobiculus cordis; plain gruel or other light nutriment was given, as most likely to remain on the stomach. The vomiting still continued; the turpentine injections occasioned much pain after they were administered, and there was a very alarming increase of exhaustion and sinking.

In this case it occurred to me that an emetic dose of ipecacuanha was the most probable remedy to rally the sinking powers, and with the concurrence of Dr. Hutchinson, I gave half a drachm, and remained with her during its operation. A fuller vomiting was induced than I could have expected, although it was small in quantity; yet it occurred to me that the natural effort had long been exerted in vain to accomplish what the ipecacuanha directly effected—that of completely emptying the stomach. I remained with my patient an hour, and left her somewhat better. After I had gone she turned herself on her left side, and remained so still for several hours as to alarm her husband, who sent for me directly, fearing she was dying. I found her pulse much improved; she was still lying on her left side; the sickness had abated. A little plain gruel was given, and a half pint injection, with equal parts of milk and gruel, was administered every four hours. A slight vomiting came on after this time, but did not continue; her appetite improved so much that there was a difficulty in restraining her from taking improper food, such as beef-steak, &c. Her stomach was disordered twice during her recovery from this cause, so as to require two emetics of ipecacuanha, which were given with advantage. The patient fully recovered, and is now in her usual health.

I was impressed in the above case, not only with the great value of the ipecacuanha, but also with the benefit arising from the clysters, in conveying nourishment to the system when in an anæmiated state, and when food could not be received or retained in the stomach; indeed, I have often thought, from the great absorbent power of the colon, that clysters might supersede the necessity of transfusion, having this advantage—the perfect safety and facility of the operation.

May 29th, 1845.

Remarks.—We apprehend that three of the above cases cannot be fairly considered as instances of exhaustion properly so called. In the first two, the sinking depended upon accumulation of secretion in the bronchial tubes. Death was threatened by asphyxia, not by collapse; and the emetic acted upon the ordinary principle, that vomiting always has a tendency to promote expectoration, in cases of bronchitis attended with profuse secretion. In the third case, the asphyxia seems to have depended upon the presence of offending matters in the stomach, and the recovery does not appear to have been wholly attributable to the action of the emetic. Mr. Higginbottom has certainly proved that emetics may be beneficially employed in *some* instances of exhaustion, but we are still of opinion that they cannot be generally employed in cases of sinking. We now believe that the observations of the author were not intended to convey the latter meaning, but the sentence which we have quoted led us to conceive that they were.—Ed. Gaz.

SURGERY.

EMPLOYMENT OF CARDED WOOL IN CASES OF SENILE GANGRENE,

BY SIR BENJAMIN BRODIE.

Some few years ago, I was in consultation with the late Mr. Vance, of Sackville Street. He had been surgeon for many years to Greenwich Hospital. Being always anxious to obtain what information I can from others, I observed to him: "You must have seen, among the old men at Greenwich, a great number of cases of mortification of the toes. What have you found, on the whole, to be the best local treatment? He answered, that he had found nothing to answer so well as wrapping up the parts in carded wool. I did not understand from him whether he wrapped up merely the foot or leg, or the whole limb; but he added, that he usually left it on for many days at a time. It struck me that this was a very reasonable kind of practice.' Wool is a very bad conductor of heat, and, wrapped round a limb, it must keep it of very uniform temperature, and at any rate, save, in a great degree, to the constitution the expense and trouble of generating animal heat. Soon afterwards, I had an opportunity of adopting Mr. Vance's mode of treatment. I had been poulticing a foot as usual, and the disease was going on, spreading from one toe to another, and up the foot. Carded wool is so prepared that it may be drawn out into long flakes several feet in length, and in these I wrapped up the foot; and then, thinking that I had better proceed further, I wrapped up the leg, and the thigh also, as high as the middle of the thigh. I applied it rather loosely, one flake over another, until the limb appeared to be three or four times more bulky than it was in its natural state. The result was excellent. The mortification never spread from the time that the wool was applied, and the patient recovered. I have employed the same local treatment since, in many other cases; and, although, of course, it would be absurd to represent it as always successful, yet I am bound to say, that it has produced much better results than any other whch I have ever employed.—*Lectures on Pathology and Surgery.*

TOXICOLOGY.

OXALIC ACID IN THE RHUBARB OR PIE PLANT.

A FAMILY of four persons, in this city, recently, after eating very freely of the leaves of the domestic rhubarb or pie plant, boiled, and served as "greens," were all of them, shortly after, seized with severe vomiting. In one of the persons it was followed by gastritis. The others recovered directly after the vomiting. We have occasionally seen notices in the newspapers of this plant producing noxious effects.—*Buffalo Medical Journal*, No. 1.

In the second number of the same journal, there is an analysis of the rhubarb plant, by Lieutenant Long, U. S. Army M.D. From this it appears that one of the smallest bundles in the market, weighing about one pound, contains 24⅜ grs. of oxalic acid. "The minimum fatal dose of the crystallized acid on record in standard works is half a drachm (half an ounce ?) but it would doubtless be unsafe to take a much smaller dose than this of the acid in a free state. Yet, as the diluted acid is regarded and used as a safe refrigerant in fevers, and as a portion of it exists in the pie plant, in combination with lime, and is therefore inert, it would seem hardly probable that any deleterious effects would result from the use of the plant." In one experiment, Dr. Long used the petioles or stalks, and in the other both the stalks and the leaf, without any appreciable difference in the result. These results are certainly curious, and we hope they will induce further inquiry. So far as the root of rhubarb has been examined, it would not seem to contain any free oxalic acid, but oxalate of lime, varying, according to the different localities producing it, from 11 to 35 or 40 per cent. (See Christison's Dispensatory, Art. *Rheum.*)—*American Journal of the Medical Sciences.*

Correspondence.

MARK PRODUCED BY THE UMBILICAL CORD DURING DELIVERY.

SIR,—In your number for Friday, March 12, is a case communicated by Mr. Foster, of Gadshill, Isle of Wight, where marks of an indelible character had been produced by pressure of the funis on the neck of the child.

I quite agree with Mr. Foster that cases of this description occurring under suspicious, or even questionable circumstances, might seriously compromise the life of an innocent person, and I am led to this belief by the instance which I beg to subjoin.

In November last I was called to a lady, out of the town, in labour with her second child; and, as I had attended her with the first, I did not hesitate to say, on finding the presentation natural, and the os uteri well dilated, that she would soon be out of her trouble. I was, however, much surprised to find that hour after hour made no alteration, and that the head did not advance, although the uterine contractions were regular and forcible. I made a careful examination with a view to ascertain the cause of the arrest, and found that the funis was so tight round the neck of the child that I could not pass my finger under it; there was no pulsation, and I proceeded at once with the best means at my disposal to pass a ligature under the cord, and having succeeded, I divided the cord with a pair of crooked scissors, and the child was instantly expelled.

The indentation in the neck was really a deep groove, and appeared to me so discrepant with the cause, that I fear, had I been called on to give an opinion in such a case, before a coroner's jury, I might have jeopardised the life of the mother.

A medical friend went to see the child, at my request, on the following day, and the impression on his mind was that it had been strangled with a rope. I ought to state that the funis was the shortest I ever saw.

Your obedient servant,
DAVID PRICE, F.L.S.

Margate, June 23, 1846.

Medical Intelligence.

KING'S COLLEGE HOSPITAL.

On Saturday last a meeting was held in the new hall at King's College, for the purpose of providing a larger hospital than that now in existence in connexion with the college, and for relieving from the responsibilities which they had incurred the medical officers, who had purchased a site for the new building in the neighbourhood.

We extract the following from a statement read by the Rev. Mr. Biggs, chaplain to the hospital:—

"In 1839 King's College Hospital was founded to supply a want long felt in the medical department of King's College,—namely, that of a field for enforcing practically the lessons of medical and surgical science taught at the college.

"As the number of beds is limited to 120 by the size of the building, the number of in-patients varies but little from year to year. But the estimation in which the hospital is held by the poor, is best shown by the great increase in the number of out-patients, who are not restricted in their applications even by the necessity of having a subscriber's letter. The numbers of the out-patients stand thus:—

1840	4,056
1841	8,214
1842	11,138
1843	11,643
1844	12,585
1845	15,933

"It has become a matter of urgent necessity to provide a larger hospital. A large piece of ground in the immediate neighbourhood has been purchased through the assistance of four of the medical officers, who have made themselves responsible for the purchase-money,—namely, between £3,000 and £4,000. The total amount of subscriptions announced reached the sum of £2,500."—*Abridged from the Times.*

BATHS AND WASHHOUSES BILL.

The bill to promote the voluntary establishment of public baths and washhouses in boroughs and parishes in England and Wales, was read a first time in the House of Commons on Monday night. It contains forty-three clauses, with two schedules annexed. The preamble of this measure very clearly declares its object, namely, "that it is desirable, with a view to the promotion of the health, comfort, and welfare of the inhabitants of towns and populous districts, to facilitate the establishment therein of public baths and wash-houses, and public open bathing places." With respect to boroughs, it is proposed that the measure may be adopted by the council thereof, and the expenses to be paid out of the borough fund, to which fund the income derived from the baths and wash-houses is to be paid. As to parishes, on the requisition of ten ratepayers, the church-wardens may convene a vestry meeting, and the act may be adopted by two-thirds of the vestry, and commissioners appointed by the vestry to carry the same into operation, of whom one-third shall go out of office yearly. The expenses of baths and washhouses are to be raised out of the poor's rate. There is a provision to authorise the sale of baths, &c. after seven years, when they are unnecessary, or too expensive to be kept up. By the schedule (B) the *maximum* charge to the labouring classes is to be one penny for a cold bath, with a clean towel, and 2d. for a warm bath, and in open bathing places, the charge per head is to be one-halfpenny.—*Times.*

MORE CASES OF POISONING.

Many rumours have recently prevailed in the vicinity of Norwich relative to the death of a young woman, named Maria Read, who died about a month ago in the above city. It appears that a few days previous to her decease she came from Yarmouth to reside with her father and mother, when she was taken ill with a violent sickness on a Friday evening, and early on the following morning expired, a medical gentleman, named Coleby, being in attendance upon her just before she breathed her last. There were at the time some doubts as to the cause of death, and an inquest was held upon the body, *but no post-mortem examination took place,* and the jury agreed to a verdict of "Died by the visitation of God." Owing, however, to the many suspicious reports that have been since circulated, the body on Friday night was exhumed, and the contents of the stomach submitted to Mr. Firth, the surgeon who investigated the recent cases of poisoning at Happisburgh, for examination. It is stated that the presence of arsenic has been detected in the body. No doubt, when the examination is completed, and the evidence in a more perfect state, the city coroner will re-open the inquiry into the cause of death. At present the case is involved in complete mystery.

⁂ This case, abridged from a report in the *Globe*, furnishes an additional proof that the crime of secret poisoning is encouraged not so much by the infrequency of inquests, as Sir James Graham alleges, as by the very careless manner in which they are conducted. The verdict of "Died by the Visitation of God" assigns no cause of death, and leaves the case exactly where it stood, *i. e.* to turn out one of poisoning, or to be passed over as "natural death" according to circumstances.

In connection with this case we may call attention to some others reported in a late number of the Provincial Journal,* in which two children are proved to have died from arsenic. An inquest had been previously held on the body of one, and a verdict of "*found dead*" returned. After this two other children died successively in the same family,—establishing our position that one undetected case of poisoning passed over at an inquest, almost invariably leads to the repetition of the crime. The second child, chiefly on the representations of the mother (the woman now committed to take her trial for murder), was certified to have died of "convulsions." Arsenic was proved, on an exhumation of the bodies, to have been the cause of death in these two cases; and there is reason to believe that the desire to procure "burial club money" was the motive which led to the perpetration of the crime!

We have since been informed of two other recent cases, of poisoning with arsenic in this city. In one the individual, an adult, had been pronounced to have died from "*cholera*;" in the other, a child, from "*marasmus*." On an inspection of the bodies being subsequently made, arsenic in large quantity was found in the stomachs of both! Such are the evils which must always attend inquiries into the causes of death in the absence of post-mortem examinations.

ACTION FOR ALLEGED MALAPRAXIS.

Farrer v. *Wildbore.*

The following case was tried in the Court of Exchequer on Saturday last. The plaintiff brought an action against the defendant, a surgeon, to recover compensation in damages for negligence in the treatment of a fracture of the radius. The fracture was treated in the usual way by the defendant's assistant; but when the splints were removed the ulna was found, as it was stated, displaced, and this was ascribed to negligence. Among the medical witnesses examined for the plaintiff, some considered that the treatment had not been skilful. For the defendant Mr. Liston and Mr. B. Cooper were called. The former deposed that the treatment pursued had been quite proper, and that a protrusion of the end of the ulna often occurred naturally after a fracture of the radius. He considered that the plaintiff might use his arm quite as well as any one could after such an accident. Mr. B. Cooper at once put an end to the case by producing in Court a professional gentleman whom he had attended for a similar accident. He had treated him to the best of his ability; and yet some time subsequently to the removal of the splints the ulna had dropped, and it was now a worse arm than the plaintiff's! Upon this evidence the jury returned a verdict for the defendant without hearing counsel in reply.

⁂ This was a most effectual way of stopping an action, and it might, we believe, be more frequently adopted than it is in these alleged charges of malapraxis, in which the most trivial circumstances are seized upon by plaintiff and attorney as fair legal grounds for imputing negligence.

THE HARVEIAN ORATION.

The Harveian Oration was delivered on Saturday, the 27th ult., by Dr. John Elliotson, in the library of the College of Physicians, in presence of the President and Members of the College, and a large number of visitors among whom we recognised several dignitaries of the Church, and a few distinguished public characters.

The orator commenced his discourse by reading (in English) an extract from a writing by Harvey, wherein it is stated that the annual Latin oration was instituted for the purpose of handing down to posterity the names of the great medical founders of the College, and of inciting their successors to imitate their good example; to cultivate the science of medicine by investigation; and to live in mutual amity. These expressions were employed by the orator (or, we should more correctly say, the reader) as the leading subjects of his address. He commenced by detailing the most prominent events which marked the lives of the great medical luminaries of England in the sixteenth and seventeenth centuries, referring to their collegiate studies and their literary labours, as well as to the part which they took in founding and endowing the Royal College. Among the latter of these worthies the great name of Harvey, of course, received due honour from the orator, who dwelt very elaborately upon the history of the discovery of the circulation, and upon the opinions which were entertained by the ancients with reference to the use of the heart and its appendages. The honest, steadfast, and laborious character of the great anatomist also recieved due meed of praise.

Thus far the oration was perfectly unobjectionable, and we had begun to hope that the orator, as well as the authorities of the College, had concurred in the belief that it would be necessary to exclude altogether from the address any allusion to those particular subjects of which the orator has of late years been so strenuous an advocate. In this, however, we were disappointed. Mesmerism, although not referred to by name, formed a conspicuous subject in the second portion of the address. Full weight was given to the difficulties that have attended the promulgation of certain great truths, and the prejudices which have retarded the introduction into practice of certain valuable remedies,—such as the cinchona bark, and the practice of vaccination. The orator evidently wished his audience to believe that they were in the present day indulging in a similar prejudice against the doctrines of animal magnetism!

---

* June 24th.

The oration, which was unnecessarily long, was listened to with attention, although the heat of the room compelled several of the audience to leave during its delivery. At its conclusion the orator received loud, but not general, applause. A considerable number of the members dined together in the hall subsequently to the oration. The chair was taken by the President, and several distinguished visitors were present.

HEALTH OF TOWNS BILL.

We have hitherto declined commenting on the clauses of this Bill, from the conviction that before its introduction into Parliament, considerable alterations would be made. A bill containing no less than three hundred and twenty-five clauses, affecting the rights and privileges of all the corporate towns and boroughs of England and Wales except London, was not likely to become an act of the legislature until its provisions had been most thoroughly examined and discussed. It now appears that the suggestions made and alterations proposed have been so numerous that, according to official information, the present bill will be withdrawn, and an entirely new one introduced. It remains to be seen, however, whether recent ministerial changes may not for a time cause a delay in the introduction of this important and useful measure.

MEDICATED MILK.

We learn from the last number of the *Gazette Médicale* (27 Juin) that a new Institution for the medication of milk has been lately established at Montrouge, near Paris. The physicians who superintend it propose to treat certain classes of patients with the milk of goats and cows, after having placed these animals on a system of medical treatment adapted to develope in the milk those therapeutic qualities which may be requisite for the treatment of particular diseases! This, we suppose, may be termed the *milk cure*.

ROYAL COLLEGE OF CHEMISTRY.

The last evening meeting of the members of this College for the present session was held in Hanover Square, on Wednesday last, the Right Hon. W. B. Baring, M.P. in the chair.

A paper by Professor Knapp, "On the Influence of Science on the Progress of National Industry," was read by Dr. Gardner, the Secretary. In our next number we propose to give an abstract of this paper, which tends to show the great losses annually sustained in some of our manufactures, owing to a want of application of proper chemical principles.

FRENCH SCIENTIFIC CONGRESS.

The French Scientific Congress will hold its fourteeth annual meeting at Marseilles on the 1st September next. The session will last ten days. There will be six sections for the natural sciences—agricultnre, commerce, medical science, history, archæology, literature, education, philology, and the physical and mathematical sciences.—*Gaz. Méd.*

TREATMENT OF APHTHÆ BY SULPHURIC ACID.

Professor Lippich, of Padua, has recommended the following liniment in the treatment of aphthæ;—Honey, 15 parts; diluted sulphuric acid, 1 part by weight. The ulcerated surfaces should be occasionally brushed over with this liniment by means of a camel's-hair pencil. The proportion of sulphuric acid may be increased if the case is obstinate.—*Gaz. Méd.* Juin 27.

OBITUARY.

MR. THOMAS.

On the 26th inst., at Belmont, Torquay, in the 78th year of his age, Honoratus Leigh Thomas, Esq. F.R.S. late of Leicester Place. Mr. Thomas was, we believe, the oldest member of the Royal College of Surgeons. He had on more than one occasion occupied the office of President of the College. For the last few years, however, he had withdrawn himself entirely from the profession. Although not a man of shining ability as a surgeon, he acquired the esteem and respect of all those who were acquainted with him.

DR. DOMVILLE.

On the 28th inst., near Torquay, in his 68th year, James Domville, M.D. formerly of Greenwich Hospital, and Deputy Medical Inspector of Royal Naval Hospitals and Fleets.

MR. MARSH.

On the 21st inst., at Woolwich, in his 52d year, Mr. James Marsh, Practical Chemist of the Royal Arsenal, and many years Chemical Assistant to Professor Faraday at the Royal Military Academy. Although Mr. Marsh was not a member of the medical profession, we think it only a fair tribute of respect to his memory to insert this notice in our pages. Mr. Marsh is well known to the profession in England and on the continent as the inventor of an ingenious apparatus for the detection of minute quantities of arsenic. It is this instrument which has led to the important discovery of the fact that arsenic and antimony when taken as poisons are absorbed and carried into all the structures of the body. Although its use is now in a great measure superseded by other processes, yet this does not at all diminish the credit due to Mr. Marsh for this ingenious application of chemistry to toxicology.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, June 19.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	660	Males....	416	Males....	493
Females .	669	Females .	392	Females .	475
	1329		808		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population*, in 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	131
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	158
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ... .(Pop. 374,759)	124
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	170
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	225
Total	808

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Springs; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	808	892	968
SPECIFIED CAUSES	802	886	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..	151	162	188
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c. of uncertain seat	85	98	104
3. Brain, Spinal Marrow, Nerves, and Senses	145	155	157
4. Lungs, and other Organs of Respiration	208	271	294
5. Heart and Blood-vessels	32	26	27
6. Stomach, Liver, and other Organs of Digestion	93	65	72
7. Diseases of the Kidneys, &c...	6	7	7
8. Childbirth, Diseases of the Uterus, &c.	9	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	7	6	6
10. Skin, Cellular Tissue, &c.	1	1	2
11. Old Age	35	60	67
12. Violence, Privation, Cold, and Intemperance	30	25	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	2	Convulsions	31
Measles	11	Bronchitis	25
Scarlatina	17	Pneumonia......	34
Hooping-cough..	33	Phthisis	130
Typhus	38	Dis. of Lungs, &c.	9
Dropsy..........	10	Teething........	5
Sudden deaths ..	3	Dis. Stomach, &c.	9
Hydrocephalus ..	36	Dis. of Liver, &c.	19
Apoplexy........	20	Childbirth	6
Paralysis........	19	Dis. of Uterus, &c.	2

REMARKS.—The total number of deaths was 84 below the vernal and 160 below the annual average. The deaths from Zymotic diseases, with the exception of typhus fever, were also below the averages. In all the districts, the mortality was below the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer	30·06
„ „ Thermometer[a]............	69·5
Self-registering do.[b]	max. 114·5 min. 42·
„ in the Thames water.	— 76·8 — 73·2

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was nearly 11° above that of the mean temperature of the month (58·7°). The extreme hebdomadal range in the self-registering thermometer was 72·5°.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, *June* 26.—J. Hunt.—W. R. Bridges.—T. B. Purchas.—W. S. Saunders.—H. Stewart.—J. Clarke.—P. Cummins.—R. Sandford.—S. C. Griffith.—W. Cock.—A. Reith.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *June* 25.—Walter Yates, Nottingham.—Jas. Gregory, Sheffield.—Charles Tipple.

NOTICES TO CORRESPONDENTS.

Mr. J. C. Evans's cases have been received.

A lecture by Mr. Solly, and the communications of Dr. C. H. Jones and Dr. Golding Bird, will be inserted in our next number.

If it be the case, as Q states, that the Royal College of Physicians have granted an extra license to *practise medicine* on a *trivial* examination of less than an hour, it reflects disgrace upon the College. We do not see why licenses to practise medicine in the London district, should be specially conferred on those who are able to pass a good classical examination. On the contrary, it appears to us that all should undergo a strict examination in their *profession*, before receiving a diploma, and the distinction of extra and intra-urbem licenses should be abolished. We do not wish to specify cases, but we could easily point out some serious abuses to which this distinction leads, and show that the fellowship has been conferred on men who were good classical scholars, but most ill informed in their profession.

We have not been able to find the paper referred to by Mr. Marks.

Lectures.

SUBSTANCE OF A

CLINICAL LECTURE,

Given at St. George's Hospital,

By Cæsar Hawkins, Esq.
Surgeon to the Hospital.

June 2d.

1. *Incarcerated Inguinal Hernia—Suppuration.*
2. *Strangulated Femoral Hernia—Mortification of bowel—Extraordinary appearances after death (with diagrams).*

When mortification takes place in strangulated intestinal hernia, without the performance of an operation, the gangrene of the bowel is accompanied by putrid effusion into the sac, with inflammation of the sac and of the fasciæ and cellular membrane and skin to some distance over it, so that lymph and pus, with shreds of sloughy substance in several layers, are found under the skin; the skin itself becomes at first hard and thick, and of a dark livid red colour; the tumor becomes flaccid, and crepitates when in this sloughy condition; and at last the skin becomes gangrenous, and an exit is afforded for the effused fluids and sloughs, and for the contents of the bowel above the strangulation, and an artificial anus is established. While these local changes are going on a corresponding alteration takes place in the constitutional condition, and the symptoms of strangulation alter, or become mixed with those which usually attend gangrene of any important part; the sickness becomes mixed with hiccough, and there is great prostration of strength, with cold clammy perspiration, and a feeble and irregular or intermitting pulse, and the patient gradually sinks.

Two cases have recently fallen under our notice which bear upon this important subject, and are very curious in themselves, besides suggesting many interesting points of practice, and I shall therefore bring them under consideration to-day.

The first of these cases is that of James Harris, 61 years of age, who was admitted on the 6th of May, with oblique inguinal hernia, irreducible and incarcerated on the right side, about the size of a goose-egg, situated above and to the inner side of Poupart's ligament; hard, tender, and inflamed; the skin thick and tense to some extent over and around the tumor, and of a dark red colour; with resonance on percussion, and impulse on coughing. Though tender it is not painful; there is no vomiting, and his bowels were open this morning, and his pulse is regular.

He has had a rupture only a month, and cannot account for it; he was not making any unusual exertion at the time, nor has he been confined to bed for it, previous to his admission. The rupture was not returned till last Monday, the 4th, (that is, two days before his admission,) and ten minutes after its reduction it came down again, and has continued so till the present time. An hour's attempt at reduction was made in the morning before his admission, which has much inflamed the sac.

Here, then, was a rupture in the inguinal canal, which had not passed through the external ring, and in which no symptoms of strangulation existed; the bowel was simply irreducible, if, indeed, it was quite certain through the obscure sense of touch caused by a little fluid, which appeared to distend the sac, that there was actually any intestine within it, as seemed most probable; at any rate by itself it was no subject for operation in its perfectly quiet state. But then the appearance of the abdomen was very much like that which occurs when gangrene has taken place in a hernia; there was clearly much cellular inflammation below the skin, with some fluid in the sac or in the fascia over it, which the dark colour of the skin showed to be rather of a low character. It is true that this condition of the external parts might be chiefly or entirely owing to the hour's handling which he describes; and you may be sure there are few cases indeed in which the taxis should be continued, even with gentleness, for such a length of time; there is far too much risk of injuring the contents of the sac, as well as the integuments. It was true, also, that the entire absence of symptoms of strangulation was against the probability of mortification; but, though it may seem strange, the effects of a stricture are very variable in different cases, and you must not act as if violent symptoms are always to be looked for; the strangulation may go on to the destruction of the bowel, and yet there may have been no sickness or symptoms of peritonitis; the effects may be confined to the part itself, and there need not be even local tenderness to any great degree. Whenever you are concerned with a hernia it is always better even to operate unnecessarily than to incur the risk of some intestine being killed for want of it; in this case, then, with much inflammation over a hernia, with some bowel apparently down, and with fluid in or over the sac, and with a certainty that there was cellular inflammation, the proper treatment of which is usually an incision to prevent its spreading, I proposed cutting down upon the part, rather than leave it to itself, but the patient

971.—xxxviii. *July* 10, 1846.

would not give his consent; I therefore gave him a dose of calomel and colocynth, and a poultice over the inflamed part: he had previously had a warm bath. The next morning the hernia was reduced by slightly pushing it upwards and outwards; he felt very comfortable; there was no vomiting, no pain in the abdomen; the inflammation had decreased, though the fluid was still felt; the pulse was 79. He slept well, and his appetite was good; and on the 8th also the note says:—No pain; inflammation lessening, though there seems to be rather more fluid about the external ring.

And now I suppose the patient congratulated himself on his refusal, and was inclined, I dare say, to think himself a much better surgeon than I was, since he was apparently getting well. When patients recover after they have refused an operation which has been proposed to them, the judgment of the surgeon is often and not unnaturally impugned, and yet the advice may have been perfectly right. It must be remembered that our opinions are formed on a certain average result of cases, and we have no right to calculate on the chance that a case may happen to be that of a fortunate individual, who escapes the average mortality. A patient, on the other hand, having the chances fairly laid before him, may, without impropriety, if he chooses, incur a certain amount of risk above the average; and where they do refuse an operation it is surprising how many recover: the firmness of mind, or obstinacy, or whatever it is called, in particular cases, enabling them to get through diseases and dangers, to which more timid persons would fall victims.

But this amendment did not continue. On the 11th the notes say, the hernia came down yesterday, but was returned again today; there is some redness and fluctuating swelling over it, with hardness of the subcutaneous tissue; bowels open; no rigors; tongue clean. On the 14th, the hernia is continually coming down, obliging him to keep his hand pressed on the inguinal canal; and the skin around, with the cellular tissue, is soft, fluctuating, and œdematous, and he made this worse by trying to wear a truss over the inflamed part. On the 18th, the fluid seems to be more confined to the sac of the skin; over and around it is swollen and hard, but it is not painful. On the 22d, increased redness and swelling and fluctuation; and, finally, on the 23d, there is a dark blue spot over the abscess, where the skin is ulcerating. His objections to the lancet or knife continued, however, to the last, and he went out with the abscess just on the point of bursting.

It became then certain that suppuration had taken place; and he was fortunate enough to have the cellular inflammation, with which he was admitted, not spread, as it would have done in many persons, but become a circumscribed abscess below the skin. What the fluid was below this is not so clear; at first it appeared so tense and limited, as necessarily to lie in the sac itself, but then as the hernia afterwards passed in and out of the inner ring, the fluid must have passed up also if it had been in the sac, whereas it only became more flaccid when the bowel was reduced and tense when it was down; so that I think it was most probably formed beneath the fascia propria and the distended abdominal tendon; but the patient has not come back to show us what has happened.

The case is curious in itself, but it probably made the more impression on you from its great resemblance, when first admitted, to another case of strangulated hernia, in which there actually was mortification, about five weeks ago; and this was a most remarkable case altogether, presenting us with what was inexplicable at the time of operation, and unique, I believe, when the examination after death explained what had been before observed. I understand that some gentlemen who saw the operation did not witness the examination, and some who were present when the case was examined did not see the operation, and therefore I have thought that a connected account of the whole case would be interesting to you, with the several important questions to which the case gave rise.

I allude to the case of Sarah Brynning, 42 years of age, who was admitted on the 13th April, with femoral hernia, of large size, on the right side, situated immediately under Poupart's ligament, containing intestine, not very tense, but very painful: the whole abdomen tender, and very tympanitic, marking out the folds of the intestines, especially of the colon. There is continual sickness; countenance anxious; skin hot and dry; tongue white and moist; pulse very quick, 120, and very weak. The skin to a small extent was dark and livid, and thick, as if infiltrated from gangrene of the bowel. She has also an umbilical hernia, containing omentum, loose and free from pain, which she has had for twenty years.

She has had femoral hernia for the last three years, and has worn a truss for it, being able to return it entirely even within the last week: the truss, however, kept it up only imperfectly. On Saturday, the 11th, it came down in the afternoon, and she was unable to return it; the same evening she had great pain in the part and in the abdomen, with vomiting. The redness was unnoticed till she was admitted.

Our patient had an umbilical as well as a femoral hernia, and from what I have already said of the difference in the local signs in different cases, you may suppose that it may occasionally be difficult, when there are two herniæ, to know which of them is the seat of the strangulation; there could be none in her, however, nor is there often much difficulty; it is more difficult sometimes to know if the symptoms depend on the hernia, which is visible, or on some internal cause. It is, however, far better to operate on a hernia, which is not tender and painful, when there are other symptoms of strangulation, than to incur any risk of the symptoms arising from the rupture, and being left unrelieved; I have operated, and seen others operate, under such circumstances, and found that the vomiting and other abdominal symptoms depended on internal causes, and not on the rupture, but in others the local signs have been altogether wanting, and yet the operation has saved the patient's life.

You observed in the next place how very severe the symptoms of strangulation were, as indicated by the inflammatory signs, and by the great distension of the intestines; only 48 hours had elapsed since the bowel came down, and yet you saw to what an extent the gangrene had proceeded, and in less than three days and a half her death took place: on the other hand, I have operated on cases as late as the seventh day with complete success, finding very little inflammation of the bowel, though the sickness was as great as in this case. Doubtless, the difference depends on various points; partly on the tightness of the stricture, so that twelve hours may be a fatal time, but partly also on the quantity and state of contents of the bowel above the strangulated part; besides the general condition of the patient.

It does not appear that anything had been done for this patient before her admission, nor was anything material done before the operation. I happened, if I remember right, to call at the hospital shortly after her admission, and I gave an hour for her to become quieter after her removal, and for you to be summoned, and then proceeded to the necessary operation, which was required even if the hernia had gone up, on account of the gangrenous condition of the outer parts.

The notes tell you that an incision was made the whole length of the hernia through the integuments, when it was found that the cellular tissue was infiltrated with pus and lymph, the lower parts being glued together by inflammation. On cutting down to the sac, not being able to expose it properly, half a crucial incision was made outwards; the exposed sac was dark coloured, and when cut into a large quantity of dark coloured fluid, like treacle, escaped. The sac contained several turns of intestine, altogether about fifteen or sixteen inches in length, which was full of air and liquid, and continued tense, but its colour was dark; it had lost its transparency, in fact, and had spots of gangrene in some places.

The treacle-like fluid, which appeared on opening the sac, had every appearance of having come from the interior of the bowel, though it had not the proper fæcal smell; but when this happens with gangrene of the bowel the intestine generally lies flaccid after the emptying of its contents, and a laceration becomes apparent. In this case, however, the bowel remained, as you saw, distended and tense, and no more fluid seemed to come away from pressing and handling the bowel; so that I concluded that, although thicker and darker than usual, it must have been the secretion of the sac, and of the surface of the strangulated intestine.

I therefore divided the stricture upwards and inwards in the usual manner, and had to determine what I should do with the gangrenous intestine.

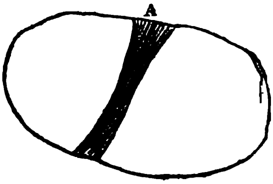
When the bowel mortifies in strangulated hernia, it is found in two different states; in the one it is soft and flaccid, and lacerable, and no circulation is apparent in it; it is usually of a dull brown colour, and is altogether dead, and no course is open to you but to make a free incision in it to let the contents of the upper bowel escape, and so make an artificial anus: in the other it is not quite dead, but gangrenous; spots of actually dead texture are seen, but the rest is smooth, and the coats are visible, and retain the contents, so as to remain distended, and the green or brown spots are mixed with the rest of the serous membrane, in which blood still circulates; and in this case it is often advisable to return the bowel into the abdomen. When so returned, there is very little tendency to recede from the aperture of the hernial ring, the strangulated part lies in contact with it, and a passage is afforded through the canal; it is fixed by lymph to this situation, if the inflammation is healthy, so that when the mortified portions separate they escape perhaps by the wound, and there is an artificial anus for a time, the channel being easily retained because there is no acute angle between the upper and lower bowel, as when it is left in the sac. I operated, for instance, on a woman with femoral hernia, the intestines being strangulated in the omentum, and I returned the bowel, which was apparently not actually gangrenous; about the third or fourth day some yellow matter came from the wound, which was evidently fæcal, and continued to escape for three or four days, when the little aperture closed, and the patient got well. If the little pieces pass away by the natural channel, it may be without our being aware of it; or else sometimes I have seen a secondary attack of inflammation about the time that the sloughs were likely to separate, which I have attributed to this cause. In either case the mortified bowel is enclosed by adhesion to the adjacent parts, whatever they may be, and none of the fæcal matter escapes into the general cavity of the abdomen.

The bowel in our patient was in the latter state—not actually dead; and after the stricture was divided it partially regained its colour by exposure and the return of circulation, and therefore, having separated some recent adhesions, I attempted to return the whole of what was down; but some difficulty was experienced in doing this, some of it going up readily, but some returning again, and part resisting the moderate force which the state of the bowels rendered prudent. On careful examination to ascertain the cause of the difficulty, I now found a small aperture in the bowel close to the neck of the sac, from which the same treacle-like fluid escaped which filled the sac when it was first opened, and which had, no doubt, escaped from this opening, though it was so small as not to allow much to come out while I had tried to reduce the bowel.

This discovery led to a change of my intentions. When a small aperture is found in a healthy bowel, or if any accidental wound is produced in the operation, it is right to take up the sides of the orifice with a pair of forceps, and tie it in a circular knot, cutting off the ends close, and then to return it into the abdomen, with the expectation of the ligature coming away by the wound or by the canal of the bowel, in the way I have before spoken of, without any extravasation into the abdomen. But here was an opening in the most changed part of the bowel; there could be no healthy lymph probably to close the opening, and I was induced to think it best to treat it as a mortified bowel, by making an artificial anus. Before doing so, however, I thought it right to examine accurately the state of the neck of the sac, lest I had before broken up the adhesions of the bowel, which would have endangered the receding of the bowel within the abdomen, with consequent extravasation of its contents; usually, when you find gangrene, there is no fear of this, because sufficient adhesion almost always takes place to fix the bowel in the ring where it remains alive; but if there is any doubt, you will take the additional precaution of fastening the bowel in the wound.

On more minute examination of the inner part of the neck of the sac, it was next found that *two portions* of bowel were protruded, which were separated from each other by a band of whitish-yellow substance passing obliquely from above downwards and outwards, but nearly perpendicularly, as in the diagram (fig. 1); so that the femoral ring was divided into two openings, out of each of which a fold of intestine escaped; the inner and under one being rather the smallest and least gangrenous, and the upper and outer larger and more gangrenous. The nature of the intervening substance, as it joined the upper and lower margins of the ring, was not evident.

FIG. 1.



A. Appearance of femoral ring in the operation.

Here there was a new state of things, introducing fresh considerations of importance; and I may observe, that in performing the operation, all the preceding questions, and what I have now to discuss, had to pass through my mind, and the result to be decided at once. If it was right at first to endeavour to return the bowel, and this again appeared improper, when an opening in the gangrenous part was discovered, what was now the right course of proceeding? Here were two separate portions of bowel, both strangulated and in part mortified. I could not tell how near they were to one another; one might be near the stomach, the other near the cæcum; at all events, one was above the other. If I opened only one, it might happen to be the lowest of the two; if so, the other not having any external orifice, might not allow the fæces to pass onwards after reduction, so as to relieve the distension above the stricture, and the symptoms would then continue. If I opened the right one as to this point, or if I opened both to ensure it, one might be so near the upper part of the alimentary canal that there would be no surface for absorption of chyle, and the patient would in effect be starved, and there would, at all events, be two artificial anuses; and one is bad enough. First, however, I had to consider what was the cause of this double opening; were there two separate herniæ in contact by passing through the same ring, as in some instances which have been observed? It seemed not very likely that this was the case, as there was clearly one peritoneal sac, in which the strangulated folds of the intestine were included. Of what nature was the division, then? I endeavoured, by the director and by the finger passed into the abdomen, to get round the separation and push it out, so as to see if it was safe to divide it and lay the two openings into one, as they had probably been formerly; but I could not do this, from some resistance of soft substances in the abdominal cavity. Finally, then, I determined on this plan: I determined, therefore, to take the chance of one fold recovering itself altogether, or lying at the wound for its contents to escape, if it ultimately died; and accordingly the inner and least altered portion of bowel was returned into the abdomen, and the outer and worst fold, with the ulceration or rupture in it, was freely opened, which contained a large quantity of the same dark-coloured offensive fluid as had been found in the sac. The edges of the intestine and of the incision were fastened together by ligatures; two small arteries were tied on the upper flap, and a poultice was applied to the wound, with a chamomile poultice to the whole abdomen. She had also three grains of calomel and a grain of opium, to quiet the stomach, and some beef-tea and milk were ordered.

She was at first a little relieved by the operation, so that the notes on the next morning (the 14th) say, she feels sick, but has not vomited; but this was all the benefit, for it is also said, the abdomen is much swollen and tense, but not very painful. No fæces have passed either by the natural or artificial anus, and only a small quantity of dark brown offensive fæculent matter. Tongue white, and dry; feels thirsty; pulse weak; and at half-past one the notes say, she seems to be sinking. The pulse is weaker; tongue dry; great thirst. Abdomen still much swollen, and tympanitic. On dilating the aperture of the bowel with the finger, a large quantity of dark fœtid fluid escaped from the opening in the bowel, which appears quite free, as the finger can be passed into it readily. She has only been sick once, after taking some beef-tea. By half-past six it is noted that she had vomited three times since four o'clock. The abdomen is still swollen and tympanitic, and a small quantity of dark-brown fluid is constantly escaping from the wound. She does not complain of pain in the abdomen. Pulse weak, hardly perceptible; skin cold, covered with a cold clammy sweat, and seems to be rapidly sinking; and she died soon after one in the morning of the 15th, not quite three days and a half from the coming down of the rupture.

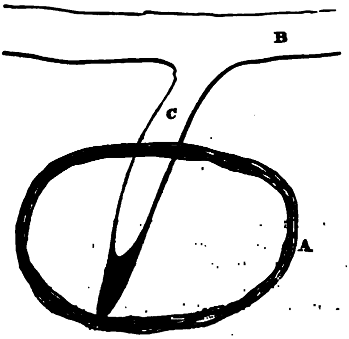
The post-mortem examination revealed the real state of things, an account of which I will read to you:—

Body well-formed, but rather spare. Abdomen tympanitic. In the right groin there was an incision, occupying the situation usually selected for femoral hernia. The skin and cellular tissue of this region were of a dark livid colour, the latter being infiltrated also with serum and lymph of an unhealthy appearance. The hernial sac was also of a dark colour, and contained two knuckles of intestine (that which I had reduced, having come out of the opening again, because quite mortified), separated from each other by a strong band, of a yellowish colour, placed obliquely across the peritoneal opening of the sac. Both knuckles were in a state of mortification, and one of them, situated above and a little to the outside of the other, had been laid extensively open, and fixed at the two extremities of the incision by two ligatures passing through the skin and cellular tissue. On examining the parts in the cavity of the abdomen several convolutions of small intestine, of a very dark colour were found united to each other, to the circumference of the femoral ring, and to the parts in the immediate neighbourhood, by the adhesions, which were, however, easily destroyed by the finger.

After carefully unravelling all these convolutions it was discovered that the yellowish band above described as dividing the hernial sac, at its peritoneal extremity, into two parts, was itself formed by a portion of the small intestine, about a foot from the cæcum, and covered with lymph, which had become united by very firm adhesions to the two opposite points of the mouth of the hernial sac, which was very large. The portion of gut thus fixed was placed nearly horizontally across the sac, running in a somewhat oblique direction from without inwards (in the operation, however, its position was as I have before told you nearer to the perpendicular than to the horizontal direction). On opening the intestine, this part of the gut was found to form a species of diverticulum, deviating somewhat from the course of the intestinal canal in its immediate neighbourhood. This deviation was most probably produced by the attached parts of gut involving only a portion of the diameter of the tube, the other portions being drawn upwards at some former period. You will perhaps understand this description from the diagram which I have made (fig. 2, next page), and you will perceive that if I had divided the band, the nature of which I could not ascertain in the operation, I should in fact have cut across this portion of bowel, where it formed the partition.

The knuckle of intestine which had slipped *under* the band thus produced, was situated about three inches above that portion which had formed the band itself; it was, besides, twisted upon itself, thus adding to the difficulty already existing in the passage of the fæces. The knuckle of intestine which was *above* the band, and which had been laid open by Mr. Hawkins at the time of the

FIG. 2.



A. Femoral ring. B. Small intestine within the abdomen. C. Diverticulum passing to the inner surface of the femoral ring, and firmly united to its upper and lower margins, so as to divide it into two openings.

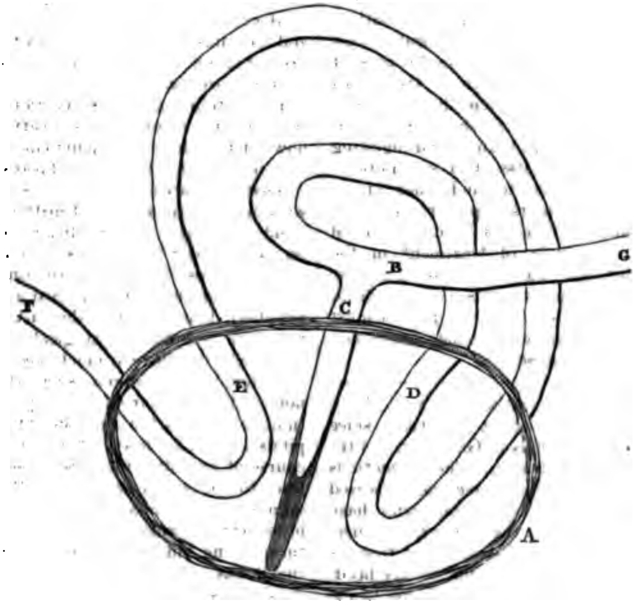
operation, belonged to a convolution of intestine situated nine inches above that portion of the intestine which was below the band (fig. 3).

Both these knuckles were in a complete state of mortification, but the line of demarcation was not well defined. The small intestines above the strangulated portions were distended with fæces and flatus. All the intestines were much injected, and their convolutions were adherent to each other. There was also a small quantity of bloody fluid in the cavity of the peritoneum. The omentum was puckered up into a thick band passing down over the intestines, and fixed to the parts in the neighbourhood of the right femoral ring; it was of a dark colour, and much inflamed. In the umbilical region was an old hernial sac. The other viscera in this cavity presented nothing remarkable.

Such, then, is a description of this very curious and interesting case, to which none published I believe bears any resemblance. I do not know, however, that I could have proceeded very differently, in any respect, if I had known the state of parts. You will observe that the knuckle which I had selected to open, as the uppermost and most mortified, and as having the opening in it, proved to be, as I hoped, the nearest to the stomach, so that making a second artificial anus, by opening the other knuckle, would have been of no use whatever.

Neither does our time to-day allow me to enter into the subject of the necessary treatment in cases of mortification of the bowel, after the operation has been performed.

FIG. 3.



A. Femoral ring. B. Small intestine. C. Diverticulum. D. Fold of intestine turned upon itself and strangulated on the inner and lower side of the diverticulum, returned in the operation. E. Fold of intestine strangulated on the outer and upper side of the diverticulum, opened in the operation. F. Upper end of the small intestine. G. Lower end of the small intestine.

The upper bowel being allowed to empty itself through the artificial anus, it is very possible for the patient to recover, and for the opening to close; the fæcal matter at first escapes entirely from the wound, but in time finds its way into the bowel below, either directly, by the acute angle at which the upper and lower extremities lie, becoming less from their retraction, or indirectly, through the intervention of the sac, or a more direct opening may be established by operation. You may see by a preparation which I took from a patient of mine, the state in which the ends of the bowel are at first left after the separation of the mortified bowel; it was in a woman who was beginning to recover from the effects of the strangulation, as the passage through the artificial anus was quite free, when on the fifth day, the wound being quite clean, she was attacked with what seemed a return of peritonitis; but the pains were uterine pains, she miscarried, and died in five days more from the irritation—the uterus being sloughy, and the ovarium on one side having some pus in and around it.

How much patients will sometimes bear, and what efforts nature will make to rally, was well seen in an old man, above 70, on whom I operated about two years ago, on the twelfth day, probably, from an imperfect account given of it by the patient, certainly as long as the tenth after the strangulation, in whom the gangrene of a femoral hernia had gone much further than in our present patient, and yet for five days he tried hard to recover his strength, and had he been younger, would doubtless have recovered. I remember this man taking (and digesting it all perfectly) not less than six mutton-chops daily, with beef-tea and other things, together with four pints of porter, 24 ounces of wine, and 16 ounces of brandy; and of course the principle of treatment in the gangrene of this part, as of most others, must be the same as this; not, indeed, always to this extent, but the patient must be well supported under the depressing influence of the disease.

EPIZOOTIC IN TRANSYLVANIA.

THE disease which about two years since was so fatal to animals in Germany, has reappeared in Transylvania. The epizootic is even said to be communicated from diseased to healthy animals, by persons who have remained for a short time near the former. In a few days it manifests itself by tremors of the whole body and shaking of the head. From the nose and mouth, which are in the first instance dry and hot, there takes place an offensive discharge: pustules are formed in the skin, and diarrhœa supervenes, proving fatal in about five days from the first attack.

CLINICAL LECTURE
ON
OVARIOTOMY,

By SAMUEL SOLLY.

Delivered at St. Thomas's Hospital,

June 17, 1846.

GENTLEMEN,—I have always felt that the summer season was the best period for the delivery of Clinical Lectures, but until the present time I have hardly had any cases of sufficient interest to make it worth while calling you together. The case to which I wish now to direct your attention belongs to a class the interest of which is each day increasing. You are all well aware that an operation for the cure of ovarian disease has lately been performed in the hospital, and that the result has unfortunately been fatal.

On the present occasion I shall endeavour to give you a clear idea of the character of the disease in this case — the symptoms upon which our diagnosis was founded, the means which were employed with the view of curing it, and the way in which those measures failed, and the probable cause of their failure. Before entering into the particulars of the case, I must say a few words, and they must necessarily be very few, on the present state of professional opinion reregarding ovarian disease.

It is, I think, now very generally admitted that encysted diseases of the ovary (I do not now refer to those of a malignant character) almost inevitably lead to a fatal result.

That the disease in its progress is attended with much pain, and great distress both of mind and body; that medicine has little or no control over its progress;—under these circumstances, is it not surprising that so long a period should have passed, and so little have been done till within the last few years for their removal by surgical operation? But lately, gentlemen, much has been done, and that, on the whole, successfully; but not by those who, from their superior opportunities (I mean the surgeons of large hospitals), ought to have taken the lead in a course of operative interference so likely to lead to beneficial results. With these opinions, gentlemen, and with the opportunities which I enjoy in this large hospital, through the kindness of Mr. Green, I felt that it was my bounden duty to consider the whole question carefully, and to operate on the first case that came under my charge, if I considered it fitted for such procedure.

The first operation for the removal of an ovarian tumor on record, was performed in 1809, by Dr. M'Dowal, of Dansville, Kentucky. The operation was successful, and the tumor extracted by the large incision. Between this period and 1817, he four times performed this operation, but the details given, are short and unsatisfactory.

In his last successful case, operated on in 1817, the patient's life was nearly lost during the operation, by the ligature which had been applied round the vessels slipping, and tremendous hæmorrhage took place before another could be made secure.

The patient recovered from the effects of the operation, but continued in bad health.

Dr. M'Dowal was followed by Mr. Lizars of Edinburgh, Dr. Granville, and others; but the operation attracted little attention until, on the 12th September, 1842, Mr. Clay, of Manchester, successfully removed an ovarian tumor by the large incision. On the 16th of November, 1842, Mr. Walne followed in the same path. The operation performed by these gentlemen has been called by Mr. Walne the major operation. It is distinguished from the minor, that in the latter the cyst is tapped previous to removal, in the former it is removed entire.

I believe that the credit of commencing the performance of the *minor* operation is due to Mr. Wm. Jeafferson, of Tramlington, who performed his first operation on the 4th of March, 1836. This case is published in the 5th volume of the Transactions of the Provincial Medical Association, p. 239; and he thus simply gives his reasons for performing this operation:—"Before describing the case, I must beg to be allowed to make a few observations on the reasons which induced me to advise and perform the operation. During about thirty years, the extent of my professional life, I may have witnessed the progress of about twenty cases of this disease, but these have been invariably fatal in their termination, after years of protracted suffering of greater or less severity according to the importance of the organ which might have had its function interrupted by the pressure. Although there are well-authenticated cases of spontaneous or accidental cure recorded by Sir Astley Cooper, Dr. Haighton, and others, yet their occurrence is so very rare as to afford but a forlorn hope. Dr. N. Smith once performed the operation with success, and Mr. Lizars has published several interesting cases of extirpation of the ovary; but the danger and difficulties of these operations appeared to be much increased by delaying them till the sac had formed extensive adhesions to the surrounding viscera, and it had often occurred to my mind that the operation might be had recourse to so soon as the sac was sufficiently distended as to press firmly on the parietes of the abdomen, and before adhesion had taken place."

Mr. Walne has been the great champion of the large incision, and it is only justice to him that I should give his reasons in his own words. "My reasons for preferring to operate by the larger section were these: that it does not appear that a less extent of wound diminishes the danger of the operation in any material degree, if at all; and that the complications which occasionally present without being foreseen, and which, indeed, do not admit of being foreseen in every instance, can be better appreciated, and more suitably dealt with by the surgeon, through a free opening than through a small one.

"For example, the effusion of blood, or the escape of fluid from the cyst, either of which is a most dangerous complication of the difficulties inseparable from any mode of operating, can with no certainty be avoided in the minor, but may assuredly be remedied if they should occur in the major operation. Adhesions, too, can be divided, the parts can be cleaned, and arteries tied with facility if necessary, and the operator's mind freed from doubt as to the state of the internal parts before he carefully closes the wound. These are circumstances which the experienced operator can appreciate, and if he should not be blinded by an undue apprehension of peritoneal inflammation, he will be sure to estimate highly such palpable advantages."

At one time, gentlemen, I had contemplated describing to you the general characters of the cases which have been operated on, and the results, but I find that this plan would occupy you for too long a time; I must therefore content myself with referring you to the statistical tables which have been drawn up so well by Mr. Phillips* and Dr. Jeaffersont†. You will also find two very able articles on this subject in the British and Foreign Quarterly Medical Review, vols. xvi. and xvii.; and in the Northern Journal of Medical Science, vol. iv. p. 122, there is a good report of a debate at the Medico-Chirurgical Society of Edinburgh, in which Professor Simpson gives his opinion in favour of the operation under certain circumstances. "In summing up his statement, Dr. Simpson allowed that ovariotomy was a most serious and dangerous operation; but, at the same time, he maintained that surgeons, in declaiming against it, had used a series of arguments all, or almost all, of which would equally, and some of them still more strongly, apply against those capital operations for chronic maladies regarding the impropriety of which they did not affect to entertain one single doubt, and which they every day performed without the slightest scruple."

---

* Med. Chir. Trans. vol. ix.

† MEDICAL GAZETTE, vol. xxxv.

Dr. Simpson says "The diseased condition of the ovary to which the operation of ovariotomy was particularly applicable, if applicable at all, was, in his opinion, that form of ovarian dropsy which was by far the most frequent of all, and consisted in multilocular cystic degeneration of the organ—the gelatiniform or areolar cancer of some authors. All other forms of ovarian dropsy (as they were called) were rare in comparison to this; and to it all the remarks in such a discussion as this principally or entirely applied. In most instances—in nine cases out of ten—this species of ovarian dropsy pursued, he believed, a regular progress onward towards greater or less enlargement, insufferable distension, more or less repeated palliative tappings, frequently disintegration of the morbid structure, local irritation, constitutional exhaustion, and death. Generally it took a series of years to run its course, but sometimes it passed through its phases and progress more rapidly. We want a sufficient body of well-observed facts to know the average duration and simple natural history of this as of most other diseases.

Some authorities averred that the disease occasionally went on for 20, 30, 40, or 50 years. Dr. S. doubted entirely the truth of such alleged cases, and believed that abdominal tumors, with this history, were not affections of the ovary at all (certainly not its cystic multilocular disease), but fibrous tumors of the uterus, which were often exceedingly chronic in their progress, and, as Dr. S. had repeatedly seen, were very frequently mistaken for the ovarian affection under dispute. Again, it has been as strongly averred that cases of multilocular dropsy had been absorbed and cured. He equally and entirely doubted the validity of this observation. Errors in diagnosis would, he believed, account readily for all such therapeutical incredibilities. He had seen hysterical tympanitic distension of a portion of bowel and collection of fæces mistaken for ovarian tumors; and these were certainly quite curable. He had seen, in several instances, also, ovarian dropsy very perfectly simulated in form, figure, situation, &c., by large chronic inflammatory effusions in the cellular tissue of the pelvis and broad ligament, always commencing with, and accompanied by, inflammatory phenomena; and these, like similar inflammatory effusions elsewhere, were always more or less completely amenable to medical treatment. But he has no belief whatever that iodine, or mercury, or muriate of lime, or aqua potassæ, or diuretics, or deobstruents, or aught else, were capable of absorbing and removing the complicated structure of a multilocular cystic tumor of the ovary. He would almost as soon believe that the head could be absorbed and removed by medicine. When the disease was accompanied with much local vascular action, the occasional loss of blood was sometimes certainly beneficial; but in the general run of cases of this malady, he had long come to the conclusion that we did all that was possible with medicine, when we kept the individual functions of the economy as near as possible to their individual standards of health. Break down the activity and vigour of the system by mercury or other debilitating medicines, and then the ovarian disease only too often progressed with double strides. Seeing medicine was of so little direct use, what measures had surgery to propose? Cystic structure of the tumor had been tapped and injected in imitation of the treatment of hydrocele,—setons had been passed into it and through it, incisions had been made into its walls, &c.; but all such operations were now, he believed, abandoned, by general consent, as useless in their effects, and far too often fatal in their practice to admit at all of repetition. In fact, two measures only were at the present day applied to the surgical treatment of the disease: viz., 1. Tapping, and 2. Total Extirpation.

The first of these operations, tapping, was professedly adopted merely as a palliative measure for the present relief of the patient, not for the cure of the disease. In a very few instances the tumor appears to become bound down by adhesions after tapping, and no re-accumulation takes place; but these cases are so very rare, that in practising the operation we scarcely even venture to reckon on the possibility of this occurrence. In some cases where the tumor is very large, but the cells smaller, and containing gelatiniform matter, tapping is of no use, and cannot in any degree evacuate or diminish its contents. Fortunately for the success of this operative procedure, the anterior and superior cell, or series of cells, were generally large, and dilated more than the others, in consequence of least resistance being opposed to their growth and distension in this direction; and tapping, when adopted, though a palliative measure only, was by no means so free from danger as some practitioners think, and some writers would seem to allege. We had as yet no sufficient collection of data to show its actual results; but Mr. Southam had commenced the enquiry, by tabulating the results of twenty cases of the operation. Fifteen of these cases had been recorded by Drs. Bright and Barlow, without, apparently, any view to such an investigation, and have afforded the more valuable and unprejudiced evidence. Four of the twenty patients, or one in five, died of the effects of the first tapping. Four patients died of inflammation within a few days after the operation; three more died in one month; fourteen, in all, died within nine months after the first tapping. Of the remaining six, two died in eighteen months, and four lived from periods varying from four to nine years.

Paracentesis, whilst thus merely a means of palliation, was still a proceeding in which no inconsiderable amount of danger appeared to be incurred. Ovariotomy, on the other hand, was an operation which, if successful, was professedly a means for the perfect and radical cure of the disease. But it was undoubtedly a most serious and dangerous operation; and therefore was it warrantable or unwarrantable when judged of by the principles applied by surgeons to the determination of the propriety of other capital operations in chronic diseases? Let us consider ovariotomy, and the objections to it, in this point of view; for by such a comparative test will the propriety or the impropriety of the operation be best ascertained and determined. The principal objections which Dr. Simpson had heard urged against ovariotomy were as follows:—

It is an operation accompanied with much danger and mortality: all parties are ready to admit fully of this point. But it is by no means a matter decisive, as some think, of the impropriety of the operation. At all events, if ovariotomy is to be condemned and suppressed on this count, several of the legitimatised capital operations in surgery must be equally, or still more strongly, condemned on exactly the same charge; for it is, in reality, not more fatal than many of these operations, and even not so fatal as some of them. On this subject (the mortality accompanying capital operations in general), very erroneous views seem to be entertained by many members of the profession. The statement of a few simple statistical facts will serve to prove the position assumed, and may, perhaps, surprise those who have not directed particular attention to the subject. Dr. Churchill, Mr. Phillips, Mr. Attle, and Dr. Cormack, had each calculated the mortality in ovariotomy from the cases on record, and came to nearly the same conclusion. Dr. Simpson took Dr. Cormack's results as being those of a writer against the operation, and hence his tables could not be suspected of any unfair bearing towards ovariotomy.

Out of 89 cases in which ovariotomy had either been performed or attempted, 34 sunk, or nearly 4 in every 10 patients died.

Out of 65 cases collected by Dr. Cormack, in which the operation had been perfected, 25 died, or between 3 and 4 out of every 10 patients were lost.

Now Malgaigne has shown, that out of 852 amputations of the extremities of all kinds (including those of the fingers and toes), which were performed in the Parisian hospitals, from 1836 to 1841, 332 died, or about 4 out of every 10 proved fatal.

Among these, out of 201 amputations of thigh, 126 died, or 6 in every 10; out of 192 amputations of leg. 106 died, or 5½ in every 10; out of 91 amputations of arm, 41 died, or 4½ in every 10.

Of the amputation of the thigh, in 46 cases the operation was performed for severe injury of the limb; of these 34 died, or more than 7 out of every 10.

When we looked to the results of amputation nearer home, the results were not much more encouraging. In the Glasgow Infirmary, from 1795 to 1840, Dr. Lawrie has shown, that out of 276 amputations performed, 101 proved fatal, or nearly 4 in every 10 died.

Amongst these, out of 128 amputations of thigh, 46 died, or 3½ in every 10: out of 62 amputations of leg, 30 died, or 5 in every 10; out of 53 amputations of arm, 21 died, or 4 in every 10.

In the Edinburgh Infirmary, during the four years commencing July, 1839, there occurred 72 amputations of the thigh, leg, shoulder-joint, arm, and forearm; of the 72 patients, 37 recovered and 35 died, or nearly 5 in every 10. Of these amputations, 18 were primary. Out of 4 primary amputations of the leg, 1 patient recovered and 3 died. There was 1 primary amputation of the arm; the patient died. There were 8 primary amputations of the thigh, all the 8 patients died (see Dr. Peacock's Reports of the Hospital).

Mr. Phillips has collected the histories of 171 cases in which the larger arteries of the body were tied: of these 57 died, or about 3½ in every 10. Dr. Turnan has collected 199 cases of these operations: 66 died, or about 3⅓ in every 10. Out of 40 cases of ligature on the subclavian artery, which he has tabulated, 18 proved fatal, or nearly 5 in every 10 died.

In his work on Hernia, Sir A. Cooper records 36 deaths, among 77 operations for that disease, or nearly 5 in every 10 died. Dr. Turnan has collected 545 cases of operation for hernia; 260 proved fatal, or nearly 5 in every 10 of the patients died.

It was too serious and too startling an operation for any cases of it to remain easily hid. On the other hand, it could be readily shown that the statistics of our major surgical operations were not always reported in the most faithful manner, and so as to give the most accurate results. Malgaigne candidly confesses as much in regard to the elaborate statistics which he has collected of various surgical operations from different hospitals.

The existing results regarding craniotomy would, probably, be on all hands allowed to demonstrate one point, namely, that exposure of the cavity of the peritoneum was not so dangerous a proceeding as was before dreamed of by pathologists. Surgeons have exposed it often in surgical operations, and even left ligatures on its omental vessels when necessary, and not unfrequently with impunity.

In 1842-43, a portion of the omentum was removed in six operations for hernia, at St. George's Hospital, London. "In some of the cases two ligatures, each embracing one-half of the omental mass, were applied to all the bleeding vessels. 5 of the 6 patients recovered; one died comatose a few hours after the operation, from disease of the brain (Hewett; Med. Chir. Trans. vol. xxvii). But still it must be confessed, extreme dread of all such abdominal surgery was, and probably is, the prevailing error. The comparative success of the Cæsarean section, in the hands of continental accoucheurs, might almost have taught us a different lesson, the peritoneal cavity in that operation being of necessity freely opened up: and we may daily see the same done upon the females of some of our domestic animals, with remarkable impunity, in the coarse operation of spaying.

In the earlier years of life lithotomy is comparatively a safe and legitimate operation, and few die; but it is quite different when the operation is submitted to at 40 years of age and upwards. At and above this term of life Dr. Willis has shown from numerous statistical returns that from two to five out of every ten operated upon die.

Even what we deem slighter operations are sometimes attended in the absolute by no inconsiderable danger of life. Out of 95 cases of excision of the mamma, referred to in Dr. Cormack's Journal, for February 1843, 20 died, or 2 in every 10: in how many cases of the remaining 75 would the disease inevitably return and ultimately destroy the patient?

Craniotomy, then, is fatal in the proportion of about 35 or 40 in every 100 operated upon; but in most capital operations we have singly as high, or even a higher mortality, than 35 or 40 per cent. Amputation of the thigh is higher; so is amputation of the arm; ligature of the subclavian for aneurism is higher: tying the innominata is fatal in every case. The operation for hernia is a higher mortality. Lithotomy is as fatal in most hands after the middle term of life. Even amputation of the leg below the knee is scarcely more safe; or, at all events, as many, or more, die after amputation of the leg, in the hospital practice of Paris and Glasgow, as die after craniotomy.

It had been foolishly objected to the statistics of craniotomy that we did not know all the unsuccessful cases. Dr. S. believed that the ascertained statistics regarding it were as full and complete as the statistics regarding any other capital operation.

I will now proceed to the details of our own case.

Ovarian disease.—In the month of March, 1846, I was requested by Dr. Cohen, one of my colleagues at St. Thomas's Hospital, and Physician to the Asylum for Females at Stoke Newington, to visit a patient with him at this last-named Infirmary. The patient, Elizabeth Salter, had been a short time under his care, with all the signs of ovarian dropsy well marked, and thinking it a favourable case for operation, kindly brought her under my notice.

She is 24 years of age, sallow complexion, dark under the eyes, but her appearance is not unhealthy. She states, that she first menstruated at the age of 16, and that she has been quite regular ever since. That her general health has always been good. She has lived at home with her parents, who are silk-weavers; she has always lived comfortably.

I found her abdomen much swollen; the abdomen rounded, and giving a distinct sense of fluctuation. The abdomen had not the oval form which it presents in ascites: none of the organs were at fault, as you have in ascites. There was no evidence of disease of either liver, kidneys, or heart. The skin was not unnaturally dry or the urine scanty. The legs were not swollen. Bowels regular; appetite good; pulse tranquil, but not strong. On percussing the abdomen there were no signs of the intestines floating in the fluid; when she was lying flat on her back you did not find a clear tympanitic sound at the highest part of the tumor. Turning her on the side gave no evidence of the gut floating uppermost. But the drumming sound was stationary at the upper part of the abdomen, the colon being thrust up by the tumor, and in both lumbar regions, without any alteration being effected by position.

I said that I thought it was a favourable case for the operation, and recommended her removal to the hospital, that she might have the benefit of my colleague's opinion.

On the day she was admitted, and a few days subsequently, she was visited by Drs. Cape and Leeson, who pronounced her case clearly ovarian dropsy.

At a consultation with the above physicians, Dr. Cohen, Mr. Green, Mr. South, and myself, it was decided that the operation should be proposed to her, explaining very explicitly the dangers of it, and leaving it to her to decide on its performance. This was well done by Drs. Leeson and Cape both to her and her parents. They all joined in requesting that it should be performed.

She measured a few days before the operation 34½ inches round the abdomen; 19½ inches from one spinous process of the ileum to the other; 15 inches from the ensiform cartilage to the pubis.

Carefully examining the abdomen we could not detect any evidence of adhesion, but the contrary. The tumor moved freely in every direction; examined per vaginam it was evidently not connected with the uterus.

Mr. Phillips and Mr. Lane were both so kind as to examine her, and give me their opinion, which was most favourable to the operation.

As all the functions were performed correctly there was no occasion for any medical interference. But as I was desirous of ascertaining how far opium would agree with her I gave her small doses of morphia occasionally at bed-time, followed by an aperient. The opium agreed perfectly well.

The performance of the operation was unfortunately postponed from time to time by the occurrence of scarlet fever in the ward, and other circumstances, until the 1st of June.

Her bowels had been freely opened the day previously, so I did not give an aperient, but a common enema was administered the same morning.

Both on the day previous to the operation and on the morning of its performance I found her remarkably calm; she expressed herself comfortable, and her pulse was quiet, not in the least accelerated when I told her that I would operate on the following day.

She had no appetite on the same morning, merely taking a very little tea for her breakfast, but nothing to eat; about ten o'clock she took about two tablespoonfuls of strong beef-tea.

The temperature of the room was raised to 78°. My patient was placed on a chair without arms, with a back inclining nearly on a level with the seat. She was supported by pillows in a semi-recumbent posture, but the angle of the back was such as to enable me to allow her to lie down immediately by the abstraction of the pillows. if syncope should supervene during the operation.

At a quarter past twelve I went into the room, accompanied by Drs. Leeson, Cape, Bennett, and Cohen; and Surgeons Green, South, Mackmurdo, Travers, Clark, and Grainger; and my two dressers, Messrs. Tarswell and Eddowes.

I commenced the operation immediately by making an incision through the adipose tissue, which was about one-seventh of an inch in thickness, down to the linea alba. This incision was three inches in length; commenced about one inch from the umbilicus. I applied cold sponges to this incision, and as soon as they had arrested the hæmorrhage, which was very slight, I divided the linea alba very carefully without dividing the peritoneum. I next divided the peritoneum, and this exposed the sac, which was bright, smooth, and healthy. It moved up and down freely with the motion of the diaphragm; the peritoneum was most carefully divided to the same extent as the linea alba by means of a more pointed bistoury.

I laid hold of the sac with three-prong or bull-dog forceps, and then gave them to Dr. Cape. I next pushed in a trocar and canula, and thus drew off 17 pints of straw-coloured fluid.

As the sac became emptied I slowly drew it out of the abdomen; it followed easily, for there was not one adhesion. This enabled me to see the peduncle, which was evidently the broad ligament of the uterus, quite healthy, and of natural thickness.

About midway through the uterus and the tumor I passed a large curved needle through the peduncle, armed with ligature, which Mr. Lane recommended to me as being more tenacious than ordinary silk, and not so likely to slip. I had previously tried its strength, but neither could I nor Mr. Gard, our surgery-man, break it by any force we could put upon it; but it now unfortunately gave way, and I was only able to use it to draw through a stronger ligature, similar to that used by Mr. Walne.

Having separated my two ligatures I tied each separately in the surgical knot, exerting all the force in my power to tie them as tight as possible. I paid great attention to this point, as I had been informed by Mr. Phillips that in one of his cases the ligature had not been sufficiently secure. This part of the operation, and the drawing the peduncle out of the abdomen, appeared to give her severe pain. I then divided the peduncle so close to the sac that at one point I left a small piece of it. One half of each ligature was divided near to the knot; the cut surfaces were now carefully examined by Dr. Cape, and those immediately about me, and as there was not the slightest oozing from them the peduncle was returned within the abdomen, and the ligatures retained. A very small portion of omentum escaped from the wound, but as it was quite healthy and uninjured I returned that also. During the operation she complained occasionally of feeling faint, but by sponging the face with vinegar and water, and applying ammonia to the nostrils, complete syncope was prevented. I brought the edges of the wound together with three interrupted sutures, and applied three broad strips of plaster covering the whole with a nine-tailed bandage.

The whole operation, including the time occupied by the evacuation of the fluid, lasted half an hour. I then carried her to bed, and though she had not lost more than two drachms of blood during the operation, she was pale, low, and depressed; pulse 80, and feeble. Temperature of room 76°. A few minutes after lying down she vomited a small quantity of mucus, and complained of great pain in the abdomen; 60 minims of Tinct. Opii were immediately administered: shortly after she again vomited, but did not apparently return much of the laudanum. From this time the pain rather increased in the lower part of the abdomen, and as the vomiting still continued, 2 grains of morphia were put up the rectum by Dr. Cape's advice.

At 2 o'clock, the pain not being at all relieved, poppy fomentations were applied over the abdomen.

Within five minutes of this application she expressed herself much more free from pain, and continued comparatively comfortable till 5 o'clock; but during this period her pulse gradually became more feeble.

5 o'clock.—She now complains of a pricking sensation in her hands and feet, which appear contracted as by spasm: this was speedily relieved by friction.

½ to 6.—Was visited by Dr. Cape and Mr. Solly, who ordered the poppy fomentations to be discontinued, and the stone fomentation to be substituted. She is now almost free from pain, but low; the pulse 100, but very feeble. Nothing but a little tea to be given, which she seemed to like.

7 o'clock.—Has been quiet and dozing the last hour; has had no vomiting, and complains of no pain; still very low, with an extremely feeble pulse.

8 o'clock.—Half an hour since she complained of being sick, and immediately ejected about a teacupful of fluid: she says she is suffering but very little pain: pulse continues bad.

9 P. M.—Visited by Dr. Cape and Mr. Solly, Dr. Leeson, Dr. Cohen, Mr. Whitfield. Evidently becoming exceedingly weak; pulse scarcely perceptible. A teaspoonful of brandy was now ordered to be given, with a little ice water occasionally. This was continued at intervals according to the effect upon her pulse.

At this consultation it was agreed that, though low and depressed and faint, it was more like the depression produced on some persons by an over-dose of opium than the exhaustion which follows hæmorrhage.

There was no restlessness, no jumping up in the bed or complaining of any internal distress; but in answer to my questions she said she was free from pain, and felt she should be better if she could get a little sleep. One of the medical men present stated that a large dose of opium had produced exactly the same effect upon him. The abdomen was examined carefully, but the plasters were quite dry, and there was no appearance whatever of any hæmorrhage.

Mr. Solly remained with her, and continued to give her small quantities of brandy with ice water at intervals according to its effect upon the pulse. He also tried a little beef-tea, but she vomited it immediately.

About 11½.—Blood was seen suddenly to flow through the plasters on the abdomen. Mr. Solly immediately removed the plasters, cut through the sutures, and, passing his hand into the cavity of the pelvis, seized the peduncle of the sac and drew it out: at the same time sent down for Mr. Travers and Mr. Whitfield for assistance.

A ligature was now put round the whole peduncle, but as it was not clear that the first included the whole of the divided surface from which the bleeding came, a second was applied. All this did not occupy long, but within ten minutes after its conclusion syncope came on, from which she never rallied.

Thus within 11 hours after the operation the poor girl was no more.

The account of the post-mortem appearances I will read you in Dr. Johnson's own words, our demonstrator of Morbid Anatomy, and lecturer on Pathology.

"*Post-mortem.*—Thoracic viscera quite healthy. The cavities of the heart were empty. A large ovarian cyst had been removed from the right side of the uterus. Before the cyst was cut away a double ligature was passed through its peduncle and tied on both sides. The peduncle was composed of the ligament of the ovary, the fallopian tube, and the fold of peritoneum forming the broad ligament. The upper division of the ligature seemed to have included the fallopian tube, the ligament of the ovary, and the connecting fold of the peritoneum. The lower division of the ligature included the inferior part of the broad ligament. The ligament of the ovary and fold of peritoneum which connects this with the broad ligament, appear to have escaped from the upper ligature; and the cut surface, about one inch long, was free in the cavity of the abdomen. A blood-vessel, apparently an artery, large enough to contain a surgeon's probe, opened on the cut surface. There was no mark of the ligature on this portion of the peduncle; but a careful consideration of the manner in which the ligatures was applied, and an examination of the parts after death, will leave no doubt that the whole of the peduncle was included in the ligature before the cyst was cut away, and that a part of it subsequently escaped from the ligature. The upper ligature from which the escape had taken place, although not very loose, was certainty much less tight than the lower ligature.

The left ovary was about three times the natural size, and contained several cysts, one of which was of a dark red colour, as if from extravasated blood. The ovary was not opened, so that the contents of the cysts were not examined.

There was about one pound of coagulated blood in the pelvis. There was no appearance of inflammation in any part of the abdominal cavity. All the other viscera were quite sound.

With reference to the explanation above given of the facts of this case, it must be observed, that the part which is supposed to have retracted and escaped from the ligature is precisely that part which must have been considerably on the stretch, when the cyst was pulled from the wound in the abdominal wall, in order to put on the ligature and divide the peduncle. This part (particularly the ligament of the ovary) is very extensible and elastic, and probably was much elongated by the traction exerted upon it before its division; it was then included in the same ligature with the fallopian tube, which was little if at all stretched, by drawing the cyst from the abdomen. After being divided the extended part retracted and escaped from the ligature; after retraction it was, of course, shorter and thicker than it was while stretched and included in the ligature; and this change of shape and size sufficiently explains the absence of any mark which the ligature may have made upon it, as well as the apparent disproportion between the thickness of the part, which is supposed to have escaped from the ligature from which the escape took place.

The ovary on the left side had precisely the same relations and connections as the cyst had on the right side. This is clearly seen in the preparation of the parts. A moderate amount of traction on this ovary after death was found sufficient to double the length of the ligament of the ovary, and of course to diminish its thickness in the same proportion. When the traction was discontinued the elasticity of the parts at once restored the original length and thickness."

I am inclined to believe that the ligature must have slipped just two hours after the operation, when the fomentations were first employed, and the pain suddenly ceased, and she became more faint.

But the most important and interesting question to us all is, how are we to prevent so sad an occurrence? One plan which has been suggested is, that after tying the ligature the needle should be again run through the peduncle so as to stitch it in its place. The objection to the proceeding is, that it might delay its ultimate removal.

In one of Mr. Lizars' operations the ligature did not come away till the 76th day. I believe the better plan is that which, I understand, is now adopted by Dr. Frederick Bird. I understand that this excellent operator does not include in his ligature the fallopian tube, and only that portion of the peduncle which appears to contain vessels, tying any others separately that may require it. I have just learnt from Mr. Lee, who has obtained the Jacksonian Prize for this subject, that the number of cases which have now been operated upon amount to 103, and that the success is in the proportion of 1 to 3½; but the success which has attended Dr. Frederick Bird is most satisfactory and highly important. In a letter which I received from him a few days ago he thus expresses it:—

"The operations occurring to myself include cases of unilocular, multilocular, and colloid forms of ovarian disease; in the majority of these adhesions existed over the anterior surface of the tumor, and in these instances the base of the cyst adhered firmly to the pelvic organs. In no case has a fatal termination resulted; the return to health has been rapid and complete.

"In not more than one case have inflammatory symptoms arisen, and then scarcely assumed an acute or dangerous type. I have always relied upon prophylactic rather than remedial means, and I believe if this point were more generally insisted upon there would be little wanting to render the excision of diseased ovaria in proper cases one of the most successful operations in obstetric practice.

"The ages of the patients have ranged between 18 and 22, 35 and 45, one only having been above 50 years of age."

I should not, however, be doing justice to this operator if I did not advert to the pains which he takes and the attention which he pays to his patients after the operation. There are many men, who after having performed it skilfully and successfully, have not the patience to attend to all those minor details on which the success of the operation appears mainly to depend.

SMALL-POX IN FRANCE.

We learn that Cette, a town on the borders of the Mediterranean, is at present ravaged by small-pox. The disease has attacked both children and adults, including the vaccinated, and has produced already great mortality.

Original Communications.

ON THE STRUCTURE OF THE SALIVARY GLANDS.

By C. H. Jones, M.B., Cantab.
Lecturer on Physiology at the Medical School of St. George's Hospital.

There are two differing opinions entertained at present, respecting the arrangement of the secreting structure of the salivary and allied glands: one is that of Henle, who regards the ultimate vesicles as essentially independent, though always becoming more or less united together by absorption of their adjacent walls; the other has been adopted by Mr. Bowman, who believes that the basement membrane of the duct is continued over every vesicle, forming its limitary or primary membrane; on this view the glandular vesicles would be merely saccular prolongations of the duct, and would at no time have an independent existence as closed cavities. According to Henle, the mode in which the vesicles form their communication with the excretory duct is nearly as follows: the vesicles are aggregated together so as to form conical lobules, in the interior of which is a central cavity with which the duct directly communicates, the muscular coat of the duct becoming, he says, rapidly thinner, and being converted into the proper investment (tunique) of the lobule. I cannot altogether confirm this account, as I have never seen any central cavity in the interior of a lobule, nor can I adopt the other view entirely, as I have certainly often seen separate and independent vesicles; but I trust I may be able to show, in the following observations, that the differing opinions of the eminent authorities above cited are not irreconcilable.

In the first place, I feel satisfied from careful and repeated observation, that the glandular vesicles are occasionally to be seen distinct and separated from each other, their limitary membrane clearly traceable all round. without any appearance of their having suffered violence; such a view it is often difficult to obtain; in a section of the mass, however thin, the vesicles are so grouped together, and so overlay each other, held together by their vascular network and areolar tissue, that it is impossible to feel any certainty as to their actual condition; however, even in this manner, especially from examination of the smaller salivary glands, the lingual for instance, I think the impression would generally be left that the vesicles were, to a certain extent, independent of each other, and that the basement or limitary membrane could not be regarded as one unbroken sheet. If the piece be carefully torn up into fragments, we shall probably obtain a view somewhat of this kind; some masses of various sizes will be found, which, from their indented margins and general shape, appear to be compound vesicles, formed probably by the coalescence of two or more primary ones, the outlines of which are often indicated by imperfect remaining septa. The limitary membrane of these masses is seldom distinct all round, though the margin is mostly clear and well-defined; it is probable, I think, that this results from their having been torn off from other vesicles with which they were in connection. The aggregation of the vesicles usually takes place in an irregular manner, but sometimes I have observed short linear series consisting of two or three vesicles. Besides these larger compound masses, smaller ones will be seen of circular or oval figure, consisting of nuclei and granular matter, their outlines perfectly definite and clear, and their cohesion so strong that they float about freely without any tendency to break up; they resemble the vesicles exactly, only that they have no limitary membrane. I am inclined to think that this is not a circumstance of much importance, as they seem to have the same general relations as the true vesicles, being sometimes seen appended to the extremity of the tubular duct, and, in fact, the ducts themselves may often be observed in the same condition, consisting merely of epithelial particles, without any visible basement membrane. Lastly, true vesicles may, in favourable specimens, be distinctly observed, generally lying near the margin of a mass, just as M. Henle has represented them; their figure circular or oval, and their limitary membrane distinct in the whole circumference. I have seen, while examining the duodenal glands in the bullock, single vesicles which had become elongated; this was probably an intermediate stage of their development, as I shall subsequently endeavour to show that they append themselves to the tubular duct, and open into it.

Some confirmation of this account may be gained, I think, from examination of the lower animals. In the common snail, the kidney seems to have a structure much resembling that of the salivary glands; it consists of cells which almost all inclose a dark mass of uric acid; these are not, as far as I can ascertain, inclosed in any envelope of basement membrane, but are aggregated closely together; their form is generally circular, but I have on one occasion seen several of them considerably elongated, arranged side by side, and having their extremities, which appeared to be open, directed all the same way, this probably indicating that they had been appended together to an excretory duct.*

In the earthworm the liver consists of a thin stratum of yellowish substance, applied along a great part of the outer surface of the intestine; by careful examination this is found to consist chiefly of dark globular masses, which do not seem to have any cell membrane; others are contained in a most delicate envelope, and in others this envelope has become elongated into a kind of follicle, the extremity of which seems to be open. In this manner probably, by the elongation and bursting of the cells, the elaborated matter is discharged into the cavity of the intestine. In a little fresh water crustacean, the Daphnia, the liver is beautifully seen to consist of cells arranged all along the tract of the intestine; these cells lie naked, having no envelope of basement membrane; they manifestly adhere together, and in one instance I counted as many as six depending in a linear series from the main mass; they contain bright yellow globules of bile, which must be transmitted from cell to cell to reach the cavity of the intestine. These simple forms of animal life present to us the essential conditions requisite for true secretion, viz. an apparatus of cells to elaborate the product, and a surface whereon the secretion, when perfected, shall be poured, whether that be the original mucous tract itself, or a canal derived from it.

We have next to consider the mode in which the secreting vesicles, which at one time are separate, effect their communication with the excretory duct.

In a submaxillary gland which had been injected from the duct, I observed the following condition of one of the minute branches; it appeared as a tube of basement membrane, with a thick lining of epithelial particles; a narrow passage existing in the middle was completely filled by the injection, which had penetrated quite to the extremity; this appeared to be all but closed; the basement tissue curved round on each side, and seemed only to be deficient at a spot corresponding to the end of the central canal, from which a few particles seemed to be projecting. In another duct, examined without injection, no basement tissue could be perceived, but a well-defined tube, whose walls were made up of epithelial particles only; the extremity of this was perfectly closed. In a third specimen a tube was observed, which dilated somewhat at the terminal extremity; its basement tissue was distinct in the canal, but ceased abruptly at the extremity, leaving a wide orifice, closed only by a layer of epithelium, extending across it. In a fourth instance an injected duct was observed, which run on as a continuous tube for some distance; to one of its margins a vesicle was appended by a very short neck, over which the basement tissue of the duct was distinctly traced passing on to envelope the vesicle: the cavity of the vesicle contained a mass of epithelium, which passed off on each side to become continuous with that lining the wall of the duct, so that a short offset only of the injection in the duct entered the neck of the vessel. The arrangement of the duodenal glands, as I have observed them in the bullock, is interesting from the various conditions of the process which it presents; tubular ducts are seen descending from the mucous surface, some terminating by a single closed*extremity, others communicating freely with several appended vesicles*; circular or elongated

---

* The ducts appear to me to run in an irregular manner through the mass of the gland, and to be beset with cells on every side.

* In one instance I observed an elongated vesicle with a constricted neck, which appeared

FIG. 1.

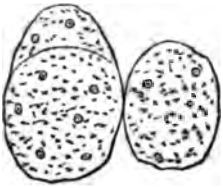


FIG. 2

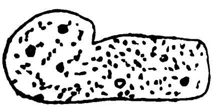


FIG. 7.

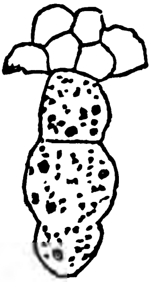


FIG. 4.

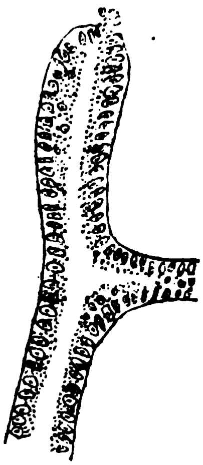


FIG. 5.

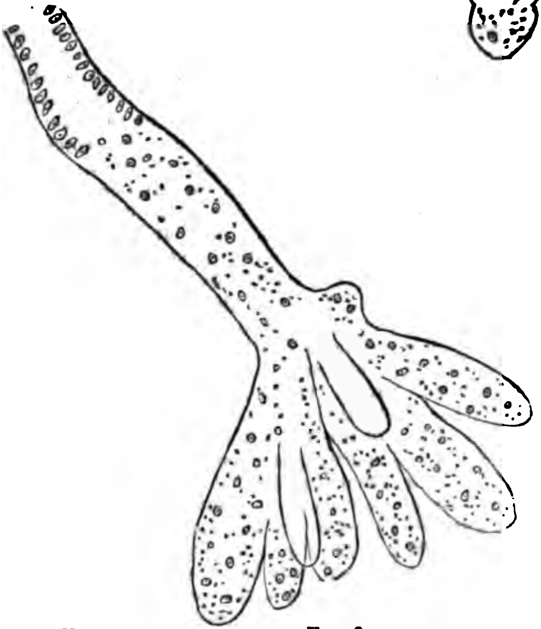


FIG. 6.

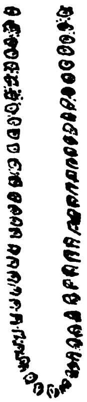


FIG. 8.

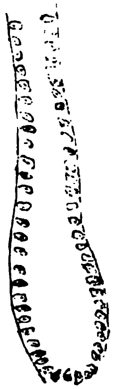


FIG. 3.

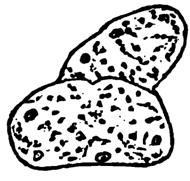


FIG. 9.

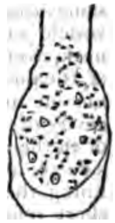


FIG. 1.—Two isolated vesicles; the larger seems to be subdivided by an imperfect septum. Diam. 1-500th of an inch.

FIG. 2.—An elongated vesicle; margin appears slightly notched. Diam. 1-400th of an inch.

FIG. 3.—A vesicle which has become elongated into a kind of neck, which is open at extremity. Diam. 1-384th of an inch.

FIG. 4.—A terminal excretory duct from a human submaxillary gland which had been injected; the injection completely filled the central canal, and penetrated to the extremity, but had not passed out; the basement membrane was distinct everywhere, except at the extremity of the canal, which seems, therefore, to have been all but completely closed. Diam. 1-400th of an inch.

FIG. 5.—A terminal duct, with several elongated vesicles appended, and freely communicating; the limitary membrane of the vesicles and of the duct is perfectly continuous; at the upper part the central canal begins to appear, the rest of the duct and the vesicles were full of nuclei and granular matter, with some larger pellucid vesicles. Diam. 1-333rd of an inch. Figs. 1, 2, 3, and 5, are taken from the duodenal glands of the bullock.

FIG. 6.—A terminal duct from lachrymal gland; it consisted of epithelium, without any visible limitary membrane; the extremity was completely closed. Diam. 1-666th of an inch.

FIG. 7.—A linear series of true vesicles projecting from the margin of a mass; a faint septum is observed between two of them.

Fig. 8.—A duct from human submaxillary gland; the basement membrane ceases abruptly at the extremity, which is somewhat dilated; the canal is closed by a layer of epithelium.*

Fig. 9.—A compound vesicle, consisting, probably, of three originally; the limitary membrane was distinctly traced all round.

separate vesicles, found occasionally among the groups, complete the list of various forms which the glandular structure may assume.

The conclusions which I would venture to draw from these observations are—First, that the vesicles exist originally as closed cavities, having no communication with the ducts, the extremities of which are at times also closed. Secondly, that at a period, which probably varies, they coalesce with each other, or with a terminal duct, according as they may happen to be situated, so that their reaction is then readily conveyed into the efferent canal. It would thus appear that the differing views before referred to regard the secreting structure under different forms, which are in fact different stages of the same process. A question may here be raised, as to whether the vesicles, when they have coalesced with the duct, or with each other, remain still as cavities, which may again close, or whether they become a part of the duct, remaining permanently tubular. The latter idea seems to me most probable, as I have occasionally seen ducts constricted at intervals as if they had been made up of two or more coalesced vesicles. If the views I have advanced be correct, the salivary glands may be regarded as an intermediate type between the permanently tubular glands, such as the kidney, and the parenchymal form exemplified in the liver, the differences in their structure having probably reference to a different rapidity in their action.

In the foregoing account I do not include the tonsils, as, though usually associated with the salivary glands, they appear to me to have a different structure. I have never been able to find any glandular vesicles, but only a multitude of cytoblasts, which form a thick layer beneath the general epithelial covering of the mucous surface.

CASE OF
EXCESSIVE SECRETION OF EARTHY PHOSPHATES BY THE KIDNEYS,
WITH LONG-CONTINUED IRRITABILITY OF THE STOMACH.
With Remarks.

By Golding Bird, A.M. M.D. F.R.S.
Fellow of the Royal College of Physicians, and Assistant-Physician to Guy's Hospital *.

The following case, although probably by no means unique, presents several points of great interest in relation to its diagnosis and treatment. The want of any analogous recorded case has induced me to offer it to the consideration of the Society, with the hope that it may serve as another addition to the well-known illustrations we are already acquainted with of the remarkable relation existing between the functions of the stomach and kidneys. I give the case in the words of Mr. Finch, the clinical reporter at the time it occurred.

George L——, æt. 18, admitted into Luke Ward, Guy's Hospital, April 9, 1845, under the care of Dr. Golding Bird. He was a native of Bristol, and had been employed at an iron factory from childhood. His habits had been active and temperate, and his health, previous to his present illness, good, with the exception of occasional attacks of what was regarded as dyspepsia, with flatulent eructations. In the spring of 1841 he was suddenly attacked with vomiting after dinner, at which meal he had taken nothing unusual. This was accompanied by severe pains at the pit of the stomach, of the same character as some to which he had been subject, although in a milder form, the preceding year. With occasional, although rare intermissions the vomiting recurred daily, after each meal, for six months, being always preceded by intense pain, which ceased on the stomach becoming emptied. The vomiting became less frequent in the subsequent eight months, occurring generally but once daily, never disappearing for twenty-four hours. He then became a patient at the Bristol Infirmary, and underwent varied treatment, with the general effect of obtaining partial and temporary relief, never, however, losing the

---

to have just coalesced with an unbranched tubular duct; the distinction between the two was very manifest.

* Read March 24th, 1846, before the Royal Medico-Chirurgical Society.

daily paroxysms of pain and vomiting. On admission into Guy's Hospital, the lad's complexion was pale and bloodless, with a slightly icteric tint; he was emaciated to an extreme degree, his bones being barely covered; and his face bore no small resemblance to a fleshless skull, over which a skin of parchment had been tightly drawn. His general appearance was that of a person worn out by malignant disease. He chiefly complained of a burning, gnawing pain, at the scrobiculus cordis, and of a heavy pain across the loins. Tongue clean and red; pulse quick and sharp; skin dry and imperspirable. He vomits shortly after each meal, bringing up his food slightly changed, and, according to his own account, has never passed a single day, during four years, without vomiting once, and more frequently several times. He complains of great thirst. The bowels act daily. Flatulent eructations frequent, and possessing the odour of stale fish. Urine copious, pale, loaded with crystals of the triple phosphate, not albuminous, alkaline; specific gravity 1·020, and evolving a disgusting fishy odour. The abdomen is distended with flatus; there is some tenderness at the scrobiculus cordis, where no tumor is perceptible. He had, shortly after his admission, vomited nearly four pints of thin, acid, yeast-like matter.

Misturæ Magnesiæ, ℥j. ter in die. Milk diet.

April 11th.—Has vomited daily after dinner, the vomited matter presenting the same yeast-like appearance. Urine has an ammoniacal odour, and deposited crystals of phosphates.

℞ Strychniæ, gr. j. Acidi Nitrici die, ʒj. Aquæ, ℥xij. Solve et sumat æges, ft. ℥j. ter in die.

He was strictly confined to milk diet, consisting of 12 ounces of bread, an ounce of butter, and two pints of milk daily, and ordered to take the medicine fifteen minutes before each meal.

14th.—Vomited yesterday before dinner, and after his evening meal, as well as after breakfast this morning.

Perstet.

15th.—Vomited last night, but not since. Has passed in the last 24 hours thirty fluid ounces of urine, depositing crystals of triple phosphate by repose. Appetite good, and begs for a continuance of his medicine. Abdomen less flatulent.

Perstet.

16th.—In no pain. Vomited last night; the first time for 48 hours, with rather more pain than usual. Urine alkaline; 40 ounces in 24 hours, and full of crystals of the phosphate.

℞ Olei Tiglii, ʒj. Lin. Saponis, ʒvii. M. ft. Linimentum scrobiculis cordis bis die illinendum Perstet. Fish diet.

19th.—Not vomited since the last report; a crop of pustules have appeared where the liniment had been applied; no pain since the cessation of the vomiting. Urine neutral, containing but few phosphatic crystals. Complains of great thirst.

Perstet.

22d.—For the last two nights the skin has acted freely. Urine free from deposit. Specific gravity, 1011.

Perstet.

From the date of this report the same treatment was continued, and the patient steadily improved; the vomiting ceased, the urine became acid, he recovered his flesh—indeed became decidedly fat: it was scarcely possible to recognise in him the wretched skeleton admitted but a month before. On May 19th, he suffered a slight relapse both of pain and vomiting, following a severe paroxysm of pains in the region of the left kidney, and relieved by a copious discharge of urine loaded with triple phosphate, and rapidly becoming alkaline and fœtid. He appeared to recover from this in a few hours, and left the hospital strong enough to attend to his work, and apparently well; having continued the strychnia during six weeks, and taken altogether about eleven grains of that alkaloid.

May 31st.—The lad appeared among the out-patients apparently pretty well. He had suffered one slight relapse since leaving the hospital, consequent upon an enormous meal of tripe and onions. On examining the urine, it was normal in quantity, paler than it should be, acid, but still contained an excess of phosphates.

This case presents several points worthy of attention, both in connection with its diagnosis and treatment. The general history of this lad, his emaciated and care-worn appearance, would have induced me to have referred the origin of the extraordinary irritable condition of stomach to some organic disease of that viscus, and had an epigastric tumor been detected, there would, notwithstanding the youth of the patient, have been but little to prevent the diagnosis of pyloric disease. In the latter disease, as well as in such cases of ulceration of the mucous membrane of the stomach which I have had an opportunity of examining, the urine has never presented the appearance of that secreted by the patient under consideration. Indeed so far from being remarkably copious, the secretion has been generally found to be rather scanty, and instead of being pale and wheylike has possessed a deep brown or red tint, and in the majority of cases has deposited urate of ammonia, more or less deeply stained with purpurine.

The connection of alkaline urine with blows or other mechanical injuries inflicted upon the spine is now generally recognised, and every one is familiar with the almost constant presence of phosphatic deposits as the result. But I am not aware of attention having been previously directed to the connection of this condition of urine, and attending diuresis, with intense irritability of stomach, or at all events, of their standing to each other in the relation of cause and effect.

Sickness, or rather continued and distressing nausea, has been long recognised as a frequent symptom of the passage of a calculous concretion along the ureter. My colleague, Dr. Barlow, has in a very interesting paper published in the 7th volume of Guy's Hospital reports, succeeded in adducing a considerable body of evidence in support of the proposition enunciated by him in the following terms: "that there is a certain symptom connected with irritation of the kidney, which although not confined to it alone, is not necessarily connected with disease of those structures whose affections are most likely to be confounded with those of the kidneys. So that when this symptom is absent, we may disembarrass ourselves of the consideration of all such affections of the kidney as would necessarily be attended by irritation of that organ: and when this symptom is present we are furnished with a reason for assigning the seat of the disease to the kidney, in preference to several adjacent structures. The symptom alluded to being sickness or rather irritability of stomach." The cases recorded in Dr. Barlow's paper in which the sickness was present, were examples either of organic disease of the kidneys, or of calculi impacted in these organs. It has since occurred to me to meet with many cases in which the copious excretion of uric acid, in the form of crystalline gravel, has been attended with analogous symptoms; but the one now brought before the society was the first that occurred to me, in which the excretion of large crystals of the triple phosphate appeared competent to the production of a similar train of symptoms. I am not insensible to the possibility of a different induction being drawn from the phenomena presented by this case, for as, at the time of the lad's admission into the hospital, there were symptoms in the shape of gastrodynia, and a vividly red tongue, sufficiently urgent to warrant, on a *primâ facie* view, the idea of the stomach being the organ primarily involved. To such a view I have only to oppose the fact of all experience being wanting to prove the co-existence of the extraordinary state of the urinary secretions with any gastric affection with which I am acquainted. In support of this I might be permitted to allude to the long continuance of the ailment, and its refusing to yield to the varied and persistent treatment directed by several careful and experienced practitioners, who, as far as could be learnt, had made the stomach the chief object of attack. It is obvious that no argument can be drawn from the actual presence of gastric symptoms, as an erythismic state of the mucous membrane of the stomach must have been the necessary result of persistent vomiting, whatever might have been the originally exciting cause.

Not to trespass too long on the time of the society, I may venture to express my own conviction of the etiology of the case in a few words. A lad of delicate frame is engaged in laborious occupations, often far beyond his strength for years, during that part of life which is most susceptible to marked influences; functional derangement of the spinal marrow ensues, marked by the pain across the loins, and altered state of the urine. The stomach thus rendered irritable scarcely retains food, emaciation results, the patient is unable to obtain a sufficient supply through the medium of the stomach for the sustenance and reparation, much less for the increase, of tissue. The necessary result is, his stunted growth, extreme emaciation, and the excretion of an unhealthy fluid from the kidneys, the necessary result of the impaired condition of the vital chemistry of these organs, itself an almost constant, although often transitory, result of the slightest mechanical injury to the spine.

I may remark, that I several times made a careful analysis of the urine with the especial view of detecting hippuric acid, but in no instance was I successful in detecting it. This examination w.s made in consequence of some general resemblance existing between the character of the urine in this case and some published on the continent, in which the presence of the acid alluded to was remarkable.

The strychnia was administered in consequence of its well-known influence upon the functions of the spinal marrow, and believing that where alkaline urine is really secreted as such by the kidneys, independently, of course, of the character of the ingesta, there is always some lesions of that important structure. Its effects was certainly most satisfactory, for after years of almost incessant vomiting, the patient soon acquired the power of retaining his food, the urine slowly losing its alkaline character. I would, indeed, venture to press this important remedy upon the notice of surgeons, to whose province cases of alkaline urine following injury to the spine more immediately belong; for although not prepared to state anything approaching to a belief of its infallibility, I would still express an opinion that in many cases where especially there is no serious organic mischief, the strychnia would be more successful in relieving the distress attending upon the chemical changes going on in these cases, in the urine after secretion, than any other remedy with which I am acquainted. Nor can I avoid here taking the opportunity of alluding to the value of this drug in the distressing vomiting so frequent in uterine affections, especially in the irritable stomach of hysteria, in which it is almost always successful as an important palliative.

Postscript.—Since the above was written three other cases, similar to the one now detailed, have fallen under my notice. In all three the urine was loaded with crystals of triple phosphate, and presented the pale whey-like colour noticed in this case. I suspect that the irritable state of the kidneys depending upon, or, at least, coincident with, the abundant secretion of phosphates, will be found a not uncommon cause of protracted nausea or vomiting.

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from p. 17.]

Part II.

Of the Healthy Functions of the Minute Blood-vessels.

As it is utterly impossible to form any correct idea of the nature of a morbid action without having first thoroughly understood the uses served in their healthy state by the particular structures affected, it is unnecessary to apologize for the introduction, in this place, of a few remarks on the physiology of the circulation; and as the minute blood-vessels are universally admitted to be the seat of the important disorders now under consideration, we cannot satisfactorily engage in the pathological inquiry without first endeavouring to determine the nature of their healthy functions, and, as far as possible, the means by which those actions are accomplished. It is, perhaps, in the present advanced state of physiology, scarcely necessary to combat the proposition so long and so tenaciously maintained, that the arteries and capillaries contribute some active share towards the motion of the blood—the power of the heart being supposed to be inadequate to this task. I may, however, remark, that it is as impossible to demonstrate the insufficiency of the heart on the one hand as it is on the other to exhibit in any of the vessels of the circulating apparatus an auxiliary source of power. But while admitting that the propulsion and distribution of the blood are mechanical processes, physiologists seem, by common consent, to have referred to certain powers assumed to exist in the capillary blood-vessels, the causation of all those important functions which are evidently more or less intimately connected with the blood's circulation.

Now, why the chain of connection between this motion of the blood as a cause, and the production of these actions as effects, should be so abruptly broken by the interposition of a mysterious membrane operating by laws which we cannot understand, inasmuch as they are totally different from those regulating the interchange of fluids through membrane, is a question which I have never been able to answer to my own satisfaction. Nor can I understand why mechanism should be supposed to cease with the mere transmission of the blood. On the contrary, it would seem much more consonant with our general experience of the beautiful simplicity of Nature's arrangements to suppose that by some skilful adaptation, some simple contrivance, the force imparted to the mass of blood by the heart's action, existing with that blood in every minute vessel of the body, and thus constituting an infinitely graduated, ubiquitous, and unceasing power, is the immediate cause of many of those actions which have hitherto been ascribed to occult and unintelligible agencies.

In a former communication to this journal (June and July 1844), I endeavoured, by numerous physical and physiological facts and arguments, to establish the following law, viz., that "all those functions which involve either the discharge through the coats of the minute blood-vessels of certain matters previously present in the blood, or the entrance of various external substances into the mass of circulating fluid, are dependent upon a preponderance, in one or other direction, of the forces acting on either surface of those vessels.". It follows, therefore, as immediate consequences of this law, that *effusion*, or the *outward* passage of fluids through the capillary membrane is promoted, 1st, *directly* by whatever increases the amount of pressure acting on the *internal* surface of the blood-vessels; and 2dly, *indirectly* by whatever *diminishes* the pressure acting on their *exterior*. While *absorption*, or the *inward* passage of fluids through the same porous structure is rendered more active, 1st, by whatever *directly increases* the amount of *external* pressure; and 2dly, by whatever increases the rapidity of the currents of blood, and thus *diminishes* the pressure acting on the *internal* surface of those blood-vessels which are subservient to this function. In assigning to the minute arterial twigs and contiguous capillaries, a certain, constant, but moderate, amount of *effusion* as their natural and specific use in the animal economy*, and in referring to the incipient venous radicles the opposite and equally important action of *absorption*, I mentioned at some length the physical and anatomical facts which support these views. As regards the accomplishment of the first action, it is, therefore, on the present occasion, only necessary for me to state, that the obstacles to the free passage of the arterial blood cause that fluid, when entering the capillaries, to exert a certain amount of lateral pressure, by means of which its albuminous portion is continually, though slowly, exuding for the purposes of nutrition.

While the streams of blood, having once entered the most contracted point of the capillary blood-vessels, so far from encountering causes of impediment, are facilitated in their course by the most perfect mechanical arrangement of the sanguiferous tubes, and consequently, like all other freely moving currents, then begin to exercise a power of lateral draught, and thus induce that preponderance of the external pressure which causes the act of absorption.

But it is impossible to advance a step further in the study of the physiology or pathology of the circulation until the term "capillaries" is clearly defined, and some attempt is made to confine within reasonable bounds their healthy powers and uses. In an anatomical point of view, many eminent men seem to think that the term "capillaries" should be restricted to those cylindrical intermediate tubes which connect the two great systems of divergent and convergent blood-vessels. And if we admit the correctness of the prevailing opinion, that all the great functions of the circulation, such as secretion, nutrition, and absorption, are in some incomprehensible manner performed by these highly endowed tubules, and that the contiguous arteries and veins, and, in fact, all the different parts of the circulating system, are provided for the sole purpose of supplying them with blood, it may then be convenient to retain this exclusive application of the term. But both the anatomical and physiological reasons in favour of the maintenance of this distinction would seem to be destroyed by the fact, that in certain tissues of the body some of those functions do proceed, and inflammation and other morbid actions do occur, although no such intermediate cylindrical vessels can be shown to exist. The opinion has, in all probability, arisen from a too hasty application to the whole body of the results furnished by a microscopical examination of the blood's course through the lungs, where, for a specific purpose, the extent of the intermediate vessels is greatly increased. And as I am not aware of any satisfactory reasons for supposing that these intermediate vessels possess functions different from those of the contiguous venous and arterial ramifications; and as the latter, and more especially the adjacent arterial twigs, are equally with the former vessels the seat of those disorders of the circulation which are now about to be considered, I shall use the term "capillary" in its literal sense as synonymous with "minute."

---

* Though compelled to speak of the function of the arterial, as distinguished from that of the venous capillaries, I am anxious to have it distinctly understood as my opinion, that the *coats of these vessels take no part whatever in the causation of either process*; the active power, which induces both effusion and absorption, being, in the healthy state, wholly derived from the columns of blood contained within those vessels.

In concluding this brief recapitulation of the views contained in my former paper, it only remains for me to add, that as the relative facilities afforded for the passage of the blood through the minute vessels of different organs and structures must necessarily vary with the anatomical arrangement of those vessels, so will the activity, and even the nature, of those functions which are connected with the amount of lateral pressure of the blood-currents be in the same proportion affected. In a secreting structure, where effusion is continually occurring, the internal pressure will preponderate in the intermediate vessels as completely as in the minute diverging ones: while in a vascular arrangement, like that of the lung, it appears to me very certain that the cylindrical vessels possess an absorbing power not inferior to that of the adjacent veins. It is also, from the same reasoning, evident that a vessel which, in a healthy state, absorbs, will, on the application of an obstruction to the blood's passage through it, lose that power, and take on the opposite action—effusion. The same portion of capillary tube may, therefore, at different times, and under opposite conditions, be an absorbing and an effusing vessel.

[To be continued.]

ON THE ACTION OF THE SALTS WHICH DISSOLVE FIBRINE.

BY DR. ZIMMERMANN.

THE salts which have the property of dissolving fibrine are the carbonate, borate, and phosphate of soda, and the nitrate, sulphate, acetate, and hydriodate of potass. Their action on the fibrine is not purely chemical, as they cause no change when brought into relations with that compound. The salts may be seen, under the microscope, to separate unchanged. They exercise a contractile influence on the capillaries, and also on the blood-vesicles themselves, deepening their colour and exciting the secretion of carbonic acid, plainly in consequence of a more active oxydation of the organic ferruginous compound the vesicles contain. All these salts act on the whole mass of the blood into which they are absorbed. Dr. Zimmermann had a striking proof of this. He gave two drachms of nitre daily for seven successive days to a soldier labouring under arteritis, and having occasion to bleed him on the seventh, examined the serum. It presented a bluish white appearance, and deposited on the inner surface of the stone jug in which it was contained such a quantity of the salt, that it might have been collected by a scruple at a time. The atrophy which the continued use of these salts induces proves that, while they promote the regressive they interrupt the progressive metamorphosis of the tissues."—*British and Foreign Medical Review.*

MEDICAL GAZETTE.

FRIDAY, JULY 10, 1846.

Medical men, whether as witnesses in civil or criminal cases, or as defendants in actions for malapraxis, have frequently great reason to complain of the license of counsel. The language employed by an adverse barrister on these occasions, is such that under no other circumstances would it be tolerated. Thus to take only a very recent instance recorded in this journal,* we find a barrister, employed in the defence of what *primâ facie* was a very bad case, when unable to overthrow the medical facts, attempting to browbeat a respectable medical practitioner by using such language as "Come Mr. Medical-man, do you mean to answer that?" In this instance the coroner very judiciously interfered to protect the witness.† It is by no means unusual on these occasions to hear it asserted or implied that a respectable practitioner has been guilty of perjury, that he is ignorant of his profession, that a jury ought not to trust to his statements, that he is an unskilful bungler, and either rendered it necessary for his patient to undergo a severe operation or actually caused his death. This practice is so common, that the injury done by casting such undeserved imputations on our professional brethren, appears to receive no consideration whatever from the public. The strange part of the practice consists in this, that a barrister is permitted to use language, which it might be libellous in a printer to circulate, although he might give a verbatim report of the proceedings. Hence it follows, that a libel, or the public utterance of what may do serious injury to a man in respect to his means of living, becomes no longer a libel when the individual giving offence, is protected by a wig and gown, and is under the shelter of a Court of Law —the sanctuary of justice!

A medical man placed in the position of a witness, or as a defendant in an action for malapraxis, may imagine that the judge will protect him. Experience shows, however, that protection cannot always be expected from this quarter. Only a short time before, the judge may himself have been in the position of a barrister, exercising the same destructive fluency of language against the reputation of another in a similar cause,—a circumstance which necessarily disinclines him to interfere with this glorious privilege of the bar, under which hard knocks may be dealt forth upon all who happen to stand in the way of an advocate. It appears to have been long since settled, that in this, lies the Palladium of English liberty,— in other words, it is quite impossible to carry on trial by jury, and to dispense justice, unless it be permitted to an advocate to abuse whom he pleases, and to throw upon others the foulest aspersions, however undeserved! We learn from a contemporary journal* in which some excellent remarks on this subject have appeared, that in one instance[*] the late Mr. Justice Bayley, who was regarded as a good judge, laid down the following, as the law applicable to these cases. "The speech of a counsel is privileged by the occasion on which it is spoken; he is at liberty to make strong even *calumnious (!)* observations against the party, the witnesses and the attorney in the cause. *The law presumes that he acts in discharge of his duty and in pursuance of his instructions;* and allows him this privilege, because it is for the advantage of the administration of justice that he should have free liberty of speech." Now it appears to us, with all deference to this learned authority, that this is not liberty but *licentiousness* of speech; and easy as it may be to bring forward ingenious subtleties in the guise of arguments in support of a practice disgraceful to those members of the bar who resort to it, we think it would be exceedingly difficult to show that it is either necessary or advantageous to the true and proper administration of justice. The law presumes that a barrister acts in pursuance of his *instructions;* but supposing this to be the case,—should there not be some check upon those who furnish instructions, which by falsehood and slander, are calculated to injure the reputation of a professional man? It is well observed in the article above referred to, that falsehoods as palpable as they are base may pervade the brief from beginning to end, and stain with the blackest dye the paper on which they are written. Are counsel to spread the malicious poison amongst the already inflammatory materials of society,—to throw out the worst insinuations against the good, and vilify the innocent, because it is said to be impossible, without such practices, to inquire after truth? To all men not bound down by the iron prejudices of a long established but vicious custom, such a proposition must carry with it its own refutation.[*] In a case lately tried, where an attempt was made to break through this "privilege" assumed by counsel, a judge, who is deservedly held in high respect, laid down the rule that the privilege, *i. e.* of heaping slander and personal abuse on an individual merely because he happens to be defendant or witness in a cause, was the privilege of the *suitor* and not of the counsel; that, in fact, the latter was the mouth-piece of the former, and therefore was not legally responsible for any calumnious aspersion which he might use in advocating the interests of his client! When we examine the principle upon which this dictum is based, it appears to us to be as unsound as every other which the advocates of this custom have advanced. There is an old legal axiom, *qui facit per alium facit per se;* but unfortunately these axioms, which make a good appearance in books, often entirely fail in practice. If an action be brought against the client, he may justify by showing that he gave no such instructions; and if against the counsel, it may be contended, as in the case referred to, that he was only the mouthpiece of the client, and that it is for the advantage of justice that he should use this liberty of speech; that in other words, it is the client and not the counsel, who was the author of the libel or slander! All this is very convenient,—a wrong is done for which there is no remedy,—and "anything that has the most remote reference to a case may be said of another, and that in the most offensive manner," if such an assumption as this be admitted. We really cannot perceive why counsel should be exempted, more than other members of society from the responsibility of what they are pleased to say of another who is a stranger to them, whether with or without instructions. It always argues ill of a case that it cannot be defended without calumniating innocent persons. The client is a unit of society like the party injured; and why is he, either by himself or indirectly by his counsel, to claim the privilege of injuring the reputation of a professional man without the latter having any means of redress? There is surely no advantage to the administration of justice in conceding this privilege of abuse to one person and in denying redress to another! But it may be urged, without "liberty" of speech, barristers would fear to undertake the cause of their clients,—a proposition to which we do not assent; because the "liberty" of speech claimed is not necessary to the advocacy of a good cause: but on the contrary it can only serve to blind the eyes of a jury to the strong points of a bad one!

---

* Vol. xxxvii. p. 1058.

† We extract the following remarks from the Times in reference to another gross case of recent occurrence. "The gentlemen of the bar do sometimes forget themselves strangely, and say things which, after every allowance is made for the heat of the moment, and for the license necessary for the client's benefit, are still quite unjustifiable. We cannot, in this place, enter fully into the merits of the question of an advocate's freedom of speech, but it will hardly be denied that his remarks ought to be confined to the matter at issue. Mr. —— appears to have acted upon the instructions which many non-professional persons have with some reason imagined to be a general formula for a barrister's brief—'No defence; abuse the plaintiff's attorney.' (witnesses?) Doubtless it is very expedient for a counsel to act up to his instructions, but surely he does not put away all discretion when he assumes the wig and gown. All the world must respect a *fearless* advocate, but none but pettifogging attorneys and knavish clients admire an *unscrupulous* one."—*Times*, June 13th.

* Law Times.

---

[*] Flint *v.* Pike, (4 Barn. and Cress. 478).

[*] How different is this practice to that which is laid down as the principle of the ideal lawyer by an eminent barrister:—

"The lawyer makes it known that he will not, even in a just cause, make use of unjust arts: he may not do evil that good may come; for real good he is assured can never grow out of evil to him who works it: much less will he use unjust arts in an unjust cause. Sophistry in argument,—misstating of evidence,—browbeatings of witnesses,—these and all other arts by which truth is perverted, or justice defeated, he regards with abhorrence, as lessons learned in the school of the father of lies."—*The Lawyer; by Edward O'Brien, Esq. Barrister-at-Law.*

We fear this must be looked upon only as the *beau idéal* of a practising lawyer. Bayle somewhere observes, that there have been saints of all professions save that of the law!

On the impolicy of this practice, we do not think we can do better than quote the remarks of an excellent writer[*]:—

"In the oral examination of witnesses a skilful cross-examiner will often elicit from a reluctant witness most important truths which the witness is desirous of concealing or disguising. There is another kind of skill, which consists in so alarming, misleading, or bewildering an honest witness, as to throw discredit on his testimony or pervert the effect of it; of this kind of art, which may be characterised as the most base and depraved of all possible employments of intellectual power, I shall only make one further observation. I am convinced that the most effectual mode of eliciting truth is quite different from that by which an honest simple-minded witness is most easily baffled and confused. I have seen the experiment tried of subjecting the witness to such a kind of cross-examination by a practised lawyer as would have been, I am convinced, the most likely to alarm and perplex many an honest witness, without any effect in shaking the testimony; and afterwards by a totally opposite mode of examination, such as would not have at all perplexed one who was honestly telling the truth, that same witness was drawn on step by step to acknowledge the utter falsity of the whole. Generally speaking, I believe that a quiet, gentle, and straightforward, though full and careful, examination, will be the best adapted to elicit truth; and that the manœuvres and browbeatings which are the most adapted to confuse the honest witness, are just what the dishonest one is best prepared for. The more the storm blusters, the more carefully he wraps round him the cloak, which a warm sunshine will often induce him to throw off."

It may be well to strengthen this opinion by that of the editor of the law journal above referred to[*]:—

"The entire system of browbeating and abuse is not only wrong in principle, and an offence against good taste and gentlemanly feeling, but it is moreover like all wrong a great mistake. It does not in the long run secure the end for which it is employed. It is always disagreeable to the Court[†], and deprives the counsel who resorts to it of that confidence and ready access to its ear which is so necessary to the successful discharge of his duties. To juries it is usually distasteful. They have the feelings of men, and it offends them to hear a witness who could have had no motive for falsehood charged with perjury; or one of blameless life loaded with obloquy, because it serves the purpose of the moment. A jury is so much more easily satisfied that a witness may be *mistaken*, than that he has wilfully perjured himself, that it is with astonishment we continually hear accusations of crime, when common sense, to say nothing of Christian feeling, would dictate that the error, if any, was only one of memory."

---

[*] Treatise on Rhetoric, by the Archbishop of Dublin.

[*] Law Times, July 4, 1846.

[†] Admitting this to be true, it is strange that the Court does not more frequently interfere to check the practice.—Ed. Gaz.

There is another point of view in which the toleration of this practice is decidedly mischievous. If calumny and slander are thus allowed to be weapons necessary for the defence of a client, or the elicitation of truth, it is not surprising that many good men should be deterred from appearing as prosecutors or witnesses on these occasions. It is this browbeating system which has occasioned a dread of giving evidence in a Court of Law among all classes, but especially among professional men: and the wonder is that society has not long since revolted against the practice. It is a kind of moral intimidation which, in our judgment, has had, and will, so long as it prevails, continue to have, a most injurious influence on the course of justice.

Reviews.

Deutschland's Heilquellen mit besonderer Rücksicht auf der Wahl derselben für Specielle Krankheitsfälle. Von Dr. K. G. Neumann. Erlangen. 1845.

The Springs of Germany, and on their selection for the treatment of particular forms of disease. By Dr. K. G. Neumann. Large 8vo. pp. 256. Erlangen: Ferdinand Enke. 1845.

Dr. Neumann has taken up the medical history of the German springs with a desire to clear it from the halo of quackery with which it has been of late surrounded. There was no lack of watering-place literature: every Spring had its guide-book, with an abundance of cases illustrative of the curative effects of the waters, and strong and disinterested (!) recommendations of particular establishments.

Dr. Neumann informs us that he undertook this work at the suggestion of Professor Canstatt, and he appears to us to have executed his task in a way which is likely to satisfy those who have occasion to refer to a work of this description. In the Hydropathic or Hydriatic times in which we are living, the external and internal use of water has been vaunted as a cure for all diseases. Judging from the boasted cures alleged to have been wrought by Priessnitz and his followers, one would imagine that the vital principle itself was actually contained in cold water; and that this agent had never been employed in the occasional treatment of diseases before the appearance of this cunning impostor. We are glad to find, however, that the Priessnitzian Water-establishments are losing some of their repute, as a natural consequence of the reaction produced by the failure of the supposed curative powers of this system of treatment, and that the old Baths of Germany are again becoming the favourite resort of invalids.

Αριστον μεν ὕδωρ, according to Pindar, but as our author remarks, while this element nourishes and supports, it is also capable of drowning a human being! Before any legitimate use can be made of mineral baths and waters in the treatment of disease, it is necessary that their effects should be closely studied, and that their employment as therapeutical or hygienic agents should be based upon scientific observation and sound experience. This is the object at which Dr. Neumann has aimed, and we think that those professional men who are in the habit of recommending their patients to visit the baths of Germany, will here find the means for making a proper and judicious selection.

The author, like all his countrymen, on whatever subject they happen to write, begins really *ab initio*. Thus we have a short geological introduction, containing some interesting remarks on thermal springs, among which we find a singular fact mentioned, illustrating the close connection of these springs with volcanic agency,—namely, that at the time of the great earthquake at Lisbon in 1755, the

Sprudel spring at Carlsbad, in Bohemia, ceased to flow. The water of this spring, which is situated on the right bank of the Tepl, has a temperature, according to Neumann, of 162° F. The chapters which follow, contain an account of the physical and chemical properties of water. The author entertains the very singular notion, that water, whether as a liquid or as ice, is capable of being transformed into light, (p. 18); and on this hypothesis, he proceeds to account for the occasional luminosity of the sea and of the icebergs in Arctic regions!

Water can only act on the human frame either through the mucous membrane or the skin; and with respect to the former, its influence must be confined to the lining membrane of the lungs, or that of the alimentary canal. Two chapters are devoted to this part of the subject; and we then arrive at the action of water on the skin, with the various descriptions of baths, and the conditions under which they may be useful or injurious. There is no unmixed good in water any more than in physic; and the paradox of the Salernian poet holds true even to our day:

Balnea vina venus conservant corpora nostra,
Corrumpunt eadem, balnea vina venus.

The modern Italians, who, according to our observation, more especially the monachal class, are not over-given to ablutions, drop the "*balnea;*" and, in reference to a vile and prevalent practice, affirm that:

Bacco Tabacco e Venere,
Riducon l'uomo in cenere.

The subject of common baths brings us naturally to that redoubtable apostle of the so-called *Water-cure,* Vincent Priessnitz. Notwithstanding that the subject is rather old, we are desirous of bringing before our readers, the "*stand-punkt*" of this man and his system, as it is described by an intelligent physician—one of his own countrymen.

"Vincent Priessnitz, an Austrian peasant, fell from a waggon, when in his eighteenth year, and fractured a rib. Owing to his keeping himself in a favourable position, the fractured bone speedily united; and as part of the treatment, he employed cold bandages and swallowed large quantities of cold water. The position of Gräfenberg, and the purity of the water in that mountainous region, rendered this place a favourite resort for invalids. Priessnitz, (attributing his cure to the water) gradually assumed the functions of a "doctor." For the last quarter of a century his fame has been steadily rising, and by the aid of cold water and "a sweating process," he has contrived to fill his pockets with a million of florins (about £80,000?). This unexpected success led to a general imitation of Priessnitz's system; and in consequence a large number of Water-establishments sprang up on all sides, where the water-doctrines are carried into operation. The method of treatment (?) pursued in these establishments, is as follows:—The cure (save the mark) commences with some tepid baths, during which the patient is well rubbed with a wet hand. The patient (never more truly named) is then rolled up stark-naked in a rough woollen blanket,—his head sticking out at one end, so that he looks like a child in swaddling clothes. He is next compelled to swallow a glass of cold water occasionally: he begins to perspire violently, and the crisis is accelerated by additional draughts of cold water. The activity of the cutaneous vessels becomes increased, just in proportion as his viscera become cooled. The duration of the sweating depends entirely on his doctor. When this is over, a pair of slippers is placed on his naked feet—he is again rolled up to protect him from the air, and is hurried off to a kind of vat, generally at some distance from the establishment.—In Gräfenberg he is carried about sixty paces in the open air, before he reaches the vat or bath in which he is next to be immersed. The temperature of the water varies in the first instance from 66° to 72°:—this is a tepid bath: it is then cooled down to a temperature varying from 47° to 52°. Sometimes these vats are so arranged, that only a part of the body is covered by water: it then becomes the duty of an attendant thoroughly to bathe the rest of the skin. The precise duration of this bath is laid down by the water-doctor, and varies from a few minutes to about an hour and a half. The patients are only allowed to remain a few minutes in the *cold* bath, and the skin is well rubbed.

"After the last bath, in which, in most cases, the patient is kept about ten minutes, he is well dried, again wrapped up and transferred to a bed-room, where he undergoes assiduous friction from the hands of a an attendant. He is then allowed to put on his clothes and must walk for half an hour, if possible in the open air. He is now fed with milk and bread as well as strawberries, cherries or other kinds of fruit. In about a quarter or half an hour, he undergoes a *douche.* He is stripped, put into a space enclosed with planks; and a stream of water conducted through appropriate channels, is allowed to fall upon him through a

> hole of from two to three inches diameter, and from a height of from ten to twenty-four feet. According to the orders of his attendant, this torrent is allowed to fall for a longer or shorter period, at one time upon a leg or an arm,—at another upon his back, and in some instances upon his head or chest. The ordinary duration of this discipline is about five minutes; but in some instances, it is carried on for three quarters of an hour!!! He is again quickly dried, clothed, and carried back to the establishment.
>
> "By the time the unfortunate patient has gone through all these processes the dinner hour arrives. The dinner consists of strong soup, beef, roast meat, vegetables, or fruit, but no condiments or spices. The provisions rather incline to a cold than a warm temperature; and cold-spring water is unsparingly drunk. About four o'clock the patient has to submit to the various kinds of topical bathing; head-baths, eye-baths, sitting-baths, &c. The last is taken in a peculiarly shaped vessel, made of tin-plate, and so constructed as to receive the nether end of the patient's person, while his knees and chest rise out of it. This cold *session* lasts about a quarter of an hour; and the patient then dresses, and takes more exercise, and drinks more cold water. Many are required to undergo the discipline of *Neptune's girdle; i. e.* a series of wet bandages so closely wrapped round the abdomen or other parts of the body, as not to admit of the presence of any air between them and the skin. This is an indispensable condition in the use of the girdle." (p. 55).

We cannot follow our author into his analysis of the problematical good and the almost certain evil which are likely to ensue from the universal application of such a system. That any civilized person can be found to undergo it, is indeed a psychological marvel: but the greater the boldness of pretension in ignorant empirics, the more certain are they of finding dupes who will obey their precepts with preternatural awe. Not to mention the outward wettings, and dryings and wrappings, what reasonable person can suppose that any good can come from a simultaneous cooling of his stomach and bowels, and violent heating of his skin, on Priessnitz's system? Notwithstanding this, the old and the young, the fat and the lean, the healthy and the diseased, the educated and the uneducated, have precipitately rushed to Gräfenberg from all quarters; and have allowed themselves to be bathed, rubbed, swaddled, and douched, and to have their bodies, legs, and arms, closely invested in these Neptune's girdles, and, according to their own statements, with considerable benefit! We shall not, like Dr. Neumann, waste our space in showing that such a mode of treating any disease is irrational and absurd; but we agree with him in thinking that the alleged beneficial effects, not merely of the Neptune's girdles, but of all other parts of the Priessnitzian system of treatment, are only explicable on the principles of hocus pocus[*].

In the second section of his work, the author gives a concise description of the most celebrated mineral springs of Germany and Switzerland. This is a very useful part of the volume;—the temperature, chemical composition, and medicinal use, whether external or internal, of the water of each spring, are successively described,—the analyses being those of the best chemists. The volume terminates with an account of all the forms of disease for which these mineral waters have been serviceably employed.

In concluding this notice, we shall remark, that Dr. Neumann has been very successful in his mode of treating the subject. His work is both amusing and instructive; and we do not hesitate to recommend it as a useful manual to those professional men who are likely to pay a visit to the Spas of Germany, or who wish for a trustworthy guide in order to make a selection among these for the benefit of their patients.

SOJOURN OF A CHERRY-STONE NINE MONTHS IN THE AIR PASSAGES.

A WOMAN, 54 years of age, without cause known to herself, was seized with fits of coughing, which came on every eight or nine days, and continued for several minutes. She had no feverish symptoms, nor pain of chest, nor unusual respiratory murmur. As the cough was always attended with sensation of suffocation she asked medical advice; but as no cause could be detected to account for the cough, it was deemed nervous, and treated accordingly, but without affording any relief. Nine months after its first appearance, during a fit of coughing, she expectorated a hard body, which, on examination, proved to be a cherry-stone, surrounded with a calcareous incrustation.—*Gazette Médicale.*

---

[*] Den beliebten Neptunsgürtel aber kann ich für nichts erklären, als für hocus pocus (57).

Proceedings of Societies.

ROYAL COLLEGE OF CHEMISTRY.

Wednesday, July 1, 1846.

On the Influence of Science upon the Progress of National Industry. By PROFESSOR KNAPP.

WE subjoin the substance of a paper lately read at the meeting of the Royal College of Chemistry. It will, we believe, be found interesting by our readers inasmuch as it is exponential of the views of a learned foreigner on the defective application of chemistry to the arts and manufactures in England.

After remarking on the favourable position of this country for the development of practical science, in the freedom of its political institutions, and the natural wealth and resources of its soil, Professor Knapp states that the arts and manufactures have not hitherto been equally aided by the natural sciences. At all events, the assistance rendered by science has been mostly confined to the mechanical. He then proceeds to say, that physics and mathematics are much older branches of natural science than chemistry; they were actively promoting the development of the arts when chemistry was not in existence, or at least but in its infancy. This may serve to account for the more perfect growth of all mechanical industry in England. Chemistry, although cultivated much later than the other branches of science, has progressed with almost inconceivable rapidity; but for this very reason, it has had less time to exercise its due influence upon manufacturing industry.

This existing defect is admitted both by manufacturers and scientific chemists, and many attempts have been made to remedy the evil, and to establish a closer relation between the two classes, that they might confer a mutual benefit on each other. British chemists, in this respect, have incontestably the merit of not keeping themselves in a proud seclusion from practical life, but they have endeavoured to afford to the manufacturers their advice and assistance in every way. Moreover, in no country has so much been done as in England to render the truths of the science accessible to the people, and especially to the working classes, at the least expense of time and money, by public and popular lectures, &c.

But however numerous and successfnl these may be, they by no means supply the wants of the manufacturer and artizan, because if he understands his position correctly, if he exercises his judgment aright, he cannot rest satisfied with the knowledge of the principles and truths of chemistry alone, but he must also know the ways and means, the processes and methods, by which scientific truths are discovered. He must be able with his own hands to practise the processes in order to solve such questions belonging to chemistry as he may meet with in his pursuits.

A practical knowledge of analytical chemistry, of a systematic course and method of investigation, can alone give the manufacturer that clearness of understanding, and skill in the chemical, which are daily exercised in the mechanical arts. Now this necessary practical knowledge of chemistry can only be obtained by practice and study in a laboratory under a qualified professor.

A very cursory glance at the state of the arts and manufactures of Great Britain would suffice to convince any one, that schools of practical chemistry must be ranked among the most beneficial institutions. The influence which this science exercises upon various branches of industry may be demonstrated both negatively and positively—negatively by referring to the innumerable mistakes and failures springing from a want of such knowledge, and positively by a reference to the brilliant discoveries and inventions which have lately sprung from the science of chemistry. The English patent list furnishes abundant examples of the former. I have lately seen one for the fabrication of blacking containing upwards of thirty chemical agents, producing a compound unparalleled since the primeval chaos!

The employment of arsenious acid in candles in order to destroy the crystallizing property of stearic acid, must surely have been done in ignorance of the fact that this acid volatilizes as arsenic in the reducing flame, and would thus poison the atmosphere where such candles are burnt.

In the soap manufactures of Lancashire immense quantities of palm-oil are employed; this oil requires to be decolourized, and for this purpose a process is had recourse to, based upon the oxydising action of bichromate of potash and sulphuric acid. The mixture in solution is added to the melted palm-oil, and of course subsides to the bottom of the vessel with the colouring matter. The process is well known as Watts's process; but so little is the principle upon which it depends understood by those who daily employ it, that, to my astonishment, I saw the sulphuric acid used so highly concentrated as to decompose the fat, and to transform it into a black mass wherever it came in contact, so that its passage through the palm-oil was marked by a black line. Thus, whilst destroying the natural colouring principle, an artificial one was produced.

The use of sulphate of soda in making glass, in the place of a large proportion of the carbonate of soda, effects a considerable saving of expense, exactly equivalent indeed to that incurred by converting the sulphate into carbonate of soda. Many difficulties beset the attempts to effect this substitution, but they were at length overcome in Germany, and the method has been in some places introduced into England. The two great mirror manufactures of Lancashire present in this respect an interesting contrast. One of these establishments is under the direction of an able chemist. This gentleman has succeeded in the use of sulphate of soda instead of the carbonate, and the glass produced at his manufactory has a faint pure green tint, which contrasts very favourably with the decidedly bluish-green colour of the glass produced in the other. The latter is under the control of a very clever practical man, but being unacquainted with chemistry, he has never been able to overcome the difficulties attendant upon the substitution of the sulphate for the carbonate of soda; and consequently not only does he fail to effect the first saving, but he produces a glass decidedly inferior in colour.

In the manufacture of lucifer-matches, the German chemists, by an exact calculation of the due proportion of the ingredients, and the selection of proper inflammable matter, succeeded in producing a match which kindles without explosion, and with the production of very little smell and noxious vapour. Those lucifer-matches manufactured without proper chemical knowledge are explosive and highly offensive.

Many tanners have been induced, for the sake of solidity, to substitute cisterns built with bricks and mortar for ordinary wood-lined pits; the consequence has been that they have found their process of tanning retarded to an extent and in a manner inconceivable: they could not devise a remedy, being ignorant of the cause. The truth is, that tannic acid is readily transmuted into gallic acid by the contact of lime.

In many of the Prussian blue manufactories the oxidation of the precipitate produced from ferrocyanide of potassium and sulphate of iron is effected in an expensive, tedious, and circuitous manner: the fluid containing the precipitate is raised by a mechanical contrivance, and made to flow over planks arranged in the manner of a staircase, in order to increase the surface of contact with the air. The same end may be obtained by very simple chemical means.

In a great soda manufactory in Lancashire I witnessed the following strange and absurd proceeding. The whole of the lime intended for the black ash is made caustic in a separate kiln; during the process soda is formed, and consequently, after lixiviation, a fluid is obtained, which is to a considerable extent caustic. The manufacturer seems to have some indistinct notion about the more energetic action of caustic alkalies. This caustic fluid is afterwards mixed with carbonic acid in a complicated apparatus in which carbonate of lime is decomposed by the action of hydrochloric acid. Thus, the carbonic acid is first withdrawn and afterwards added, for no purpose but to increase the expense. This error must not be confounded with the ordinary neutralization of caustic soda in the mother liquor.

In the ordinary pearlash and potash of commerce there exists a large proportion of sulphate of potash, often as much as 20 to 25 per cent. In many manufactories where the caustic potash alone is available, this is not recognised, and consequently instead of being separated before the crude materials are submitted to the manufacturer's process, it is allowed to remain and be separated as dross, to the great increase of expense for fuel, labour, and other materials.

On one occasion I recommended a large chemical manufacturer to make some experiments on felspar, in order to ascertain whether the potash contained in that species of rock might not be obtained for his purposes more economically than in the ordinary way of commerce. He procured, accordingly, from a distance, a quantity of felspar, but he failed to extract any potash from it. In fact, on my return to his place, and hearing the failure of his experiments, I accidentally saw the felspar he had used, and it proved to be simply silex!

Every chemist knows that a solution of chloride of lime, and in fact all bleaching salts more or less, are decomposed at a boiling heat with the evolution of oxygen and total loss of their bleaching power. Moreover he also knows that fatty substances undergo decomposition by the action of chlorine. Nevertheless a patent has been taken out for a bleaching soap, the inventor proposing to boil chloride of soda, or lime, with fatty matters, into a soap, with the idea probably of combining the detergent property of soap with the bleaching power of the salts. Irrespective of these several decompositions, wholly inconsistent with this design, the resulting salts are altogether incapable of saponification.

Whilst some of the manufacturers of England have such very defective and erroneous notions of the first rudiments of chemistry, how can it excite our surprise that certain quacks, who call themselves chemists, should succeed in enterprises which have fraud and ignorance unmistakeably stamped upon them. Common sense, one would think, might teach men that a chemical analysis can no more be made in ten minutes than a house can be erected in one day; and yet in the manufacturing districts of England, analyses are required, and paid for, we cannot say made, in ten minutes.

Instances of mistakes, malpractices, and wasteful proceedings in manufactories, might be multiplied a hundred fold; I have chiefly made a selection from professedly chemical processes, because here one would have thought the persons engaged in them would have felt their need of scientific chemistry and have sought to acquire it by any means. It is, however, far more agreeable to turn to the other side of the picture, where we find an array of brilliant inventions, the offspring of an intimate union between a rational theory and enlightened and intelligent practice.

Some of these inventions are of universal importance to mankind, and will mark an epoch in history: such, for instance, is galvano-plastics. The influence of this art upon the spread of education, enabling us, as it does, to convey the conception of the master minds of all countries to the dwellings of the humblest classes of society, must far exceed all calculations and anticipations. The impressions from copper and wood engraving thus multiplied *ad infinitum*, become scarcely matters of any cost; and in ways too numerous to mention are the influences of this art extended. The improvement in the health of the workmen, as well as in the economy of the results, is amply testified by the workshops of Birmingham, where the processes of plating, gilding, &c. are carried out on this principle.

The testing of alloys of silver by cupellation, formerly the only method known, is attended with an unavoidable loss of some thousandths of silver; it was necessary therefore to add to the alloy the same amount of pure silver. But this addition made the real value of the coin exceed the normal value, and many thousand francs were thus lost annually, until Gay Lussac brought science to the aid of this practical art, by his invention of the humid test. If, in some places, the method of cupellation is still retained, it is because it is rendered applicable by our possessing in the humid test a means of remedying its defects.

D'Arcet, in a manner quite similar, rendered an enormous amount of gold available, which was formerly left latent, and consequently useless, in silver coin. By a law passed on the 14th of June, 1829, 6,000,000 of francs were subjected to this process and recoined; 6.000,000 of francs are equal to 240,000 pounds sterling. They yielded 2,700 pounds weight of pure gold, worth about £170,000 sterling.

If science is to be estimated by its creation of wealth, this may satisfy any one of its utility.

The science of chemistry gave birth to the safety lamp of Davy, to the artificial ultramarine of Gmelin, and it has enriched the arts of glass and porcelain painting, with chromum, uranium, titanium, iridium, &c.

The production of vinegar by the quick fermentation process, of sugar from starch, and of stearic acid, have all proceeded from chemical theories. To the elucidation of the processes of formation of ferrocyanide of potassium by Liebig, manufacturers have been indebted for most material and practical improvements in its economic production.

A more happy combination of science, and the practical in art, can scarcely be adduced, than that furnished by the Royal Porcelain manufacture at Sevres.

Brogniart, Malaguti, Laurent, and other scientific men, assist in these works. Not only have their exertions led to most important improvements in a practical point of view, that is, with respect to the composition of the porcelain, the moulding, glazing, painting, &c.; but their labours, undertaken for this practical purpose, have furnished a mass of analytical data, bearing upon geology and elucidating the nature and mode of formation of various kinds of clay, and the composition of many species of rocks.

A very striking and convincing proof of the value of high science to practical arts, is to be seen in the change effected in the manufacture of crude iron, in consequence of Bunsen's researches. Every body previously had endeavoured to obtain a satisfactory explanation of the process of smelting iron ores, by examining the iron itself and the slag. Bunsen examined the gaseous products of the furnaces, and by this means made out the true theory of the process, and shewed satisfactorily the exact functions of the reverberatory furnace. He shewed that 3-4ths of the fuel were wasted, and a number of admirable improvements are being every where adopted to carry out the practical inferences from his scientific chemical investigations. In a word, iron smelting has become, under his direction, almost a new art.

I have enumerated these examples of the misfortunes of ignorance, and the value of scientific knowledge, to enforce the inevitable conclusion, that the institution of schools of practical chemistry, where the science is taught by competent teachers, must inevitably produce a real and rapid progress in innumerable branches of national industry, and must act in a thousand directions upon commerce.

I am well aware that objections may be, and are made, by practical men to this view of the supereminent importance of science, but a very little examination will serve for their refutation.

These advocates of practice unallied with science, are accustomed to appeal to many manufactures and arts, based upon chemical processes, which existed in perfection centuries before a science of chemistry was known, and remain at the present day in practice, very little modified. Thus the carbonization of wood, the separation of lead from its ores, and many other metallurgical operations, the distillation of brandy, soap boiling, the manufacture of porcelain by the Chinese, the art of painting on glass, and a few others. Now my answer to this is, that most of these ancient arts *have* received considerable improvements from chemistry already, and others are still susceptible of improvement as the science advances.

So also is the manufacture of salt spoken of, as if it proved the superiority of mere practice over science. Salt is made in Lancashire, for instance, by mere boors, and far cheaper than in Germany, where no little scientific skill and exertion are employed. But mark the reason. As I have said before, England is so redundantly rich in natural productions, that in some cases there seems to be a compensation for neglect and ignorance: thus it is in this case. In the salt works I allude to, a pure rich brine bubbles forth from the earth, requiring nothing but to be evaporated to leave a pure and marketable salt. In Germany, on the other hand, the salt must be procured from water containing often less than one per cent., charged with carbonic acid, and loaded with earthy and metallic carbonates and gypsum. Every step in the process requires skill and care to ensure success. On the first escape of the carbonic acid, the carbonates are deposited as mud, so as to make the mere pumping a matter of skill. Then the water is passed through immense layers of black thorn bushes to bring it to a certain state of concentration: here more carbonic acid escapes, and sulphate of lime separates. It can now be placed in the evaporating pans; but as the brine is heated, all carbonic acid is driven off, and thick deposits accumulate on the bottom of the pans which require, to be broken off. An immense scum rises to the top, and the solution of salt between the two, requires skill and judgment to obtain from it at last the product sought. If the English salt maker can produce salt without science cheaper than the German, he owes his superiority to nature. He certainly could not, with his ignorance of science, produce it at all from *our* materials.

Nevertheless it is not my wish to deny that many branches of the industrial arts, belonging to chemistry, accomplished a considerable advancement before the birth of chemistry as a science. This only serves to add force to my general argument; it proves that the facts of science, the truths of nature, are open to every observant eye, and are manifested to every reflecting mind; it proves that when the eye is educated to observe, and the mind fitted to judge, nature will abundantly supply matter for our use; it proves that the practical metallurgists and artisans of former times were chemists and naturalists in their way, but it by no means proves that manufacturers can *now* dispense with the use of natural science, or that any future progress can be safely anticipated without a profound and scientific study of chemistry.

Hospital and Infirmary Reports.

CLINICAL REPORT OF SURGICAL CASES,

At St. Bartholomew's Hospital.

By Luther Holden, F.R.C.S.

Demonstrator of Anatomy at St. Bartholomew's Hospital.

Compound fracture of the skull—Escape of Brain through the nostril—Fracture of the pelvis—Recovery.

Case.—An Irish bricklayer, aged 40, of very temperate habits, fell from a scaffolding twenty feet high, upon some iron bars. He was stunned by the fall. On his admission into the hospital half an hour after the accident, he was perfectly sensible, and answered questions. There was a small wound over the right eyebrow in which were seen fragments of brain. The right eyelid was closed. There was slight hæmorrhage from the right nostril. The breathing and pulse were undisturbed. He complained of pain in the head, but more of pain in the right hip.

On the following morning a portion of brain as large as a hazel-nut escaped through the right nostril with coagula of blood. The pulse had risen in frequency and force, with corresponding increase of pain in the head. Sixteen ounces of blood were taken from the arm with considerable benefit, and two calomel and jalap pills given, which produced free action of the bowels.

During the ensuing five days the treatment consisted in the occasional application of leeches to the head, and in the exhibition of salines with small doses of the sulphate of magnesia. By these means the pain in the head was relieved, but not entirely removed.

As this lingering pain, together with a furred tongue and dry skin, was in all probability referrible to a low inflammation of the membranes of the brain, it was thought advisable to institute mild salivation by small doses of Hyd. c. Cretâ. On the eleventh day the gums were affected, when the pain in the head ceased, and his general condition was decidedly improved. The wound over the eyebrow had healed, but the lid was still closed.

Our attention was now directed to the hip, where he complained of continual pain, which had steadily increased in spite of repeated leeching and other applications. Careful examination of the walls of the pelvis discovered a fracture extending across the ilium beneath the seat of pain. After the sixth week an abscess was opened directly over the fractured part of the ilium.

The subsequent progress of the case was in the highest degree favourable. Two months after the accident, he was able to walk with the help of a stick. When the drooping eyelid was raised, the axes of the eyes did not correspond. The sight in both was perfect; but if both eyes were open, double vision was the result. The only remaining trace of the injury to the skull is a preternatural prominence of the internal angle of the frontal bone. The fracture extending over the margin of the orbit, had involved the frontal sinus, and thus allowed the escape of a portion of the brain through the right nostril. The sense of smell was unimpaired.

When our patient left the hospital, in good health, eighteen weeks after the injury, he had partially regained the power of raising the eyelid, but double vision remained.

Respecting this case, Mr. Stanley observed in his clinical lecture, that, considering the amount of injury sustained by the skull and the brain, the symptoms throughout had been unusually mild, and that they had readily yielded to gentle depletion, free action of the bowels, and the moderate use of mercury. There was no apparent derangement of any intellectual function, notwithstanding the loss of a portion of the anterior lobes of the brain.

In the great majority of cases of complete recovery after fracture with lesion of the brain, the injury has been confined to the anterior lobes.

Sir Benjamin Brodie remarks that he did not discover among all the works that he consulted, a single instance of recovery from a wound of the posterior lobes of the cerebrum, or of the cerebellum, or medulla oblongata.*

Large tumor on the side of the neck —Operation—Subsequent very rapid growth of the disease—Death.—Dissection of the parts concerned.

Case.—A stout, very healthy looking girl, sixteen years of age, came under the care of Mr. Stanley on account of a tumor, about the size of a large orange, of an oblong form, with the long axis vertical, situated on the right side of the neck. It had existed upwards of ten months, and was first noticed as a small moveable lump beneath the skin, of the size of an almond. Its subsequent growth had been slow. It had never occasioned pain or interfered with the general health, which appeared to be very good. The tumor, when grasped and compressed, was firm to the feel, and so loose and moveable on the subjacent parts, as to justify the belief that its base had no deep connections. The skin covering it was perfectly healthy, and there was no enlargement of the neighbouring glands.

As there was no ground for supposing the tumor to be malignant, as it was increasing in size, and the patient was anxious to have it removed, the operation was undertaken by Mr Stanley.

When the integuments were turned aside, the mastoid muscle was seen expanded over the tumor. The muscle was divided transversely, when it was observed that the inner border of the tumor extended so deeply and so far towards the middle of the neck, that its surface was in close connection with the sheath of the great vessels. By careful dissection, the detachment of the tumor from the sheath of the vessels was effected, but in doing this, the jugular vein and nervus vagus were recognized. When the last stage of the operation—the removal of the tumor from the subjacent parts—was attempted, insuperable difficulties arose. Its base was found to extend to the transverse processes of the cervical vertebræ. Any attempt to raise the tumor from the subjacent parts created such severe pain that there could be little doubt the cervical plexus of nerves was implicated in its substance.

Under these circumstances, so much of the tumor as could with safety be removed was cut off in slices, and this was continued until the increasing hæmorrhage from the cut surface of the tumor forbade any further proceeding.

The operation was followed by very little constitutional ailment. A hope was entertained that the remaining portion of the tumor might slough away in consequence of the disturbance of its connections. But a change of the opposite kind ensued. In the third week after the operation, the tumor began to increase so rapidly that at the end of the following week it had nearly attained the size of the patient's head.

---

* Med. Chir. Trans. vol. xiv.

No serious amount of constitutional derangement came on till the fifth week after the operation, when the patient began to sink, and died at the end of the sixth.

Post-mortem examination.—The deeper portion of the tumor extended to the transverse processes of the cervical vertebræ, with which it was intimately connected. The sheath of the carotid and the nervus vagus were closely united to its inner border. The hypoglossal nerve was buried in its substance. The phrenic nerve was displaced, but not implicated in the tumor.

The tumor itself was of the consistence of firm jelly, of a yellowish colour and semitransparent, permeated throughout by vessels. Examined microscopically, it was composed of a fibrous stroma, of oil globules in great quantity, and of irregular-shaped cells, some of which were candate.

Numerous cysts of various size, containing acephalocysts with echinococci, were developed between the layers of the mesentery and mesocolon, and in the substance of the liver. One of these cysts, as large as the closed hand, was connected with the uterus and fallopian tube, and projected considerably above the pubes, like a distended bladder.

In respect of this case, Mr. Stanley observed, in his clinical lecture, that the chief practical point deducible from it, is the caution with which we are to estimate the connexions and extent of a tumor in the neck by its looseness and mobility. Here, certainly, the readiness with which the tumor, when grasped, could be moved upon the adjacent parts, indicated that it had no such deep connexions as would prevent its complete removal; but it proved otherwise.

The greater number and larger size of the vessels supplying the deeper part of the tumor, indicated that the growth had originated among the deeper parts of the neck, since we should expect to find that the chief supply of blood to the tumor would be from the situation of its origin.

The extensive hydatid disease in the abdomen, at so early a period of life, was a very unusual occurrence. It had in no way interfered with the general health, and consequently there was no ground for supposing its existence.

Injury to the Spine— Projection of the Spinous Processes of the Lower Dorsal and Upper Lumbar Vertebræ—No symptom of Lesion of the Spinal Cord — Complete Recovery.

CASE.—A healthy countryman, 46 years of age, came under the care of Mr. Stanley in November 1845. He was driving on the box of a van, under a low archway, when his head and shoulders were forcibly depressed by the roof, so that his body was, as he stated, nearly bent double. He felt something give way, and experienced most severe pain in his back. There was an unnatural projection of the spinous processes of the lower dorsal and upper lumbar vertebræ, with considerable effusion of blood at this part. The slightest pressure on the injured part of the spine occasioned acute pain. There was no impairment of either motion or sensation in the lower limbs.

The treatment adopted was the application of leeches to the spine, and strict confinement to the horizontal posture. He was not allowed to rise from the bed for more than eight weeks, in order that sufficient time should be allowed for the firm separation of the injured parts. The case progressed uninterruptedly well.

Nearly four months elapsed before the man could walk firmly and without pain in the back. Projection of the spines of the two lower dorsal vertebræ permanently remained.

A case, similar in its chief points to the foregoing, is now in the hospital, under Mr. Stanley's care.

A man, æt. 55, fell sixteen feet upon his back. He was able to stand erect afterwards, but felt so much pain that he desired to be brought to the hospital.

There was a gap between the spines of the two last dorsal vertebræ, sufficiently wide to admit the finger, with considerable surrounding ecchymosis. There was not the slightest symptom of injury to the spinal cord.

The patient is progressing rapidly towards recovery.

In both these cases the probable injury sustained was either a fracture with displacement of the body of the vertebra, or laceration of the intervertebral fibro-cartilages.

Mr. Stanley, in his clinical lecture on these cases, observed that the principle of treatment in such injuries is the strictest confinement to the horizontal posture and upon the back, for the requisite length of time to ensure the firm re-union of the lacerated fibro-cartilage, or fractured bone, before the patient is allowed to leave his bed; adding, that a confinement for not less than three months is, in such cases, expedient, bearing in mind the slow reparative powers of the injured structures.

Injury to the Spine—Paraplegia ensuing shortly afterwards—No recovery of the nervous functions.

CASE.—A healthy young woman, æt. 25, now under Mr. Stanley's care, slipped down, in January 1845, and struck the lower part of the spine against the ground.

She rose, and continued to walk for more than an hour, after which great pain was felt in the back, with increasing feebleness in the legs. Four days after the injury she was brought to the hospital, with complete loss of the power of motion, and a nearly complete loss of sensation in the lower limbs. There was no discoverable irregularity in the spine, but severe pain was caused by pressure upon the lower part of the sacrum and the lower half of the spine. The pain was not more acute upon one spot than another. No reflex action could be excited. At first there was difficulty in passing the urine, but this did not last long.

In this condition she has continued, without material improvement, up to the present time, a period of seventeen months. Every plan of treatment suggested for the recovery of impaired nervous functions has been perseveringly tried, without the slightest benefit. Among others may be mentioned local depletion, salivation, issues, blisters, electricity, and strychnine.

To meet the possibility of its being wholly a nervous hysteric affection, remedies suited to this class of disorders have been ineffectually tried. Her general health has in no wise suffered, and, upon the whole, she has rather gained than lost flesh since the accident.

The determination of the physical derangement causing this obstinate paraplegia, observed Mr. Stanley, in his clinical lecture, was a very difficult question.

Referring to the circumstance of the paraplegia not occurring for more than an hour after the receipt of the injury, it might from this be reasonably supposed that there had been an effusion of blood upon the spinal cord; if so, we might expect the nervous functions would gradually return as the blood became absorbed: but this, unfortunately, is not the case, and it is now probable that, as the paraplegia has continued with but little change for eighteen months, it will be permanent.

Selections from Journals.

PHARMACY.

ON AN IMPURITY OCCURRING IN COMMERCIAL AQUA AMMONIÆ. BY DOUGLAS MACLAGAN, M.D., F.R.S.E., LECTURER ON MATERIA MEDICA.

(*Communicated by the author.*)

Some time ago, having occasion to add nitric acid to a fluid containing an excess of ammonia, I was perplexed by observing that the liquid assumed a deep red colour passing to purple. As this was a reaction which I had not the least reason to expect in the experiment in question, I suspected impurity in the nitric acid, which had been prepared by myself as a pure reagent, and repeated the trial with the same acid and ammonia, when a similar result followed. Circumstances prevented me from inquiring further at that time into the cause of this, and it had escaped my recollection, until I called at an extensive drug warehouse here to procure some strong aqua ammoniæ, D. ·880. I was then told that if I did not care about having it quite pure, I could have some of great saturating power, but containing some foreign matter like coal-tar, which would render it unfitted for use as a pure chemical reagent; at the same time I was told that the whole of the ammonia (of which I took a few ounces), was not equally thus contaminated. This recalled to my recollection the circumstance which had previously occurred to myself, and I accordingly subjected this sample to the action of nitric acid, but without producing the least trace of the red coloration. I mentioned this to my friend Dr. Anderson, whose recent investigations into the volatile products of coal-tar * were likely to have directed his attention to this matter. I found that he had not observed it, but I speedily showed him the characteristic reaction on the sample of aqua ammoniæ D. ·920, in his own laboratory, which he had procured from the same drug warehouse. Dr. Anderson kindly assisted me in making some experiments to determine the nature of this impurity, and a few minutes sufficed to show that the impurities here were, a considerable amount of the volatile substance called *pyrrol* discovered by Runge, and a portion of what was probably naphthaline.

The following were the experiments to which this impure aqua ammoniæ, which was quite colourless, was subjected:—

1. The addition of an excess of nitric or sulphuric acid caused a rapid red coloration passing into purple.

2. The ammonia was supersaturated with muriatic acid, and a clean shaving of fir wood inserted into the fluid. It speedily became dyed of a rich purple. This is characteristic of pyrrol.

3. A portion of the ammonia was supersaturated with sulphuric acid and distilled. The distilled liquid had a marked odour of naphthaline, and crystalline-looking particles apparently of this substance floated in it. It was tested by muriatic acid and the fir wood, and gave very strongly the colour characteristic of pyrrol. Pyrrol was considered by Runge to be a base, but it distils over even from a large excess of sulphuric acid. Hoffman in his investigation of aniline, failed to obtain this substance

---

* Trans. Royal Society, Edin. vol. xvi. p. 2.

previously discovered by Runge, but Dr. Anderson in the researches quoted above found it in abundance.

4. The residue of the distillation in last experiment, which of course contained all the ammonia in combination with the sulphuric acid, was mixed with a small quantity of caustic potash. The smell of *picoline*, the new base recently discovered by Dr. Anderson (op. cit.) was distinctly perceived. More potash was then added, and the fluid distilled, when the ammonia passed over. It was now again tested for pyrrol, but hardly a trace of it could be detected.

It is easy to see how these impurities come to be present in the ammonia. It is well to know that most of the ammonia of commerce is derived from the watery liquor of gas-works, from which it is prepared by converting it into sulphate or muriate, and decomposing the salt so obtained by lime. In the preparation of this impure aqua ammoniæ, it is obvious that this process has not been followed. The manufacturer, in order to save the expense incurred by converting it into sulphate or muriate, has contented himself with procuring it by direct distillation, and thus it contains the other volatile ingredients of the gas liquor.

It is hardly necessary to say that such aqua ammoniæ is quite unfitted for chemical or pharmaceutical use. It is sold at a lower price than the ammonia of the same strength as it ordinarily occurs in commerce. That which was the subject of the above experiments, I am informed, was procured from England.

I suspected that this impure ammonia might also contain traces of hydrocyanic acid, but none could be detected by the ordinary tests.

128, George Street, Edinburgh.

TOXICOLOGY.

CASE OF RECOVERY FROM A DOSE OF CONCENTRATED SULPHURIC ACID. BY DR. BORGSTEDT, OF MINDEN.

Dr. Borgstedt was required to see a boy, aged three years, who had shortly before swallowed out of a glass from one to two drachms of oil of vitriol. The father of the boy had already given to him some spoonfuls of train oil. Dr. B. found, on his arrival, that the acid had acted powerfully on the skin around the mouth as well as on the interior, and on the back part of the fauces. The patient was lying speechless and motionless on his back; his face pale, his eyes deeply sunk and closed, his breathing difficult, and accompanied by a rattle. Carbonate of potash, dissolved in sugar-water, was immediately given at intervals, being poured gradually down his throat. Repeated vomitings followed, and a dark brown semi-transparent slimy matter was ejected from the stomach. When the vomiting had ceased, a table-spoonful of oily emulsion, mixed with carbonate of magnesia, was given every half hour. On the evening of the same day strong febrile symptoms set in, with very severe pain in the region of the stomach, aggravated by the slightest motion. Six leeches were applied to the left hypochondrium. The fever and pain in the stomach continued for three days; hence six leeches were applied to this region daily. During this period the mucous membrane of the mouth and tongue became detached, leaving deep eschars. These were smeared with a mixture of olive-oil and yolk of egg, which appeared to give great relief. The only nourishment allowed was milk. The fever began to abate about the fourteenth day, and with this the tenderness of the abdominal parietes in the region of the stomach. The mixture above mentioned was given to the child at longer intervals up to the fourteenth day. The motions underwent a marked change, and indicated the progress to recovery. On the first day they had their natural colour; from the second to the seventh day they were very hard, and appeared like slaked lime; from the seventh to the thirteenth day they assumed an ash-grey colour, and on the fourteenth day they had their usual normal characters.—*Casper's Wochenschrift*, Mai 9th, 1846.

⁂ Cases of recovery from the effects of concentrated sulphuric acid, although several are on record, are not very common. The above is well calculated to show the extraordinary powers of nature in repairing the serious injury which the acid had produced in the mouth, throat, and stomach. The treatment appears to have been throughout very judicious. According to some, soluble alkaline carbonates should not be given; but we think they are much more likely to neutralize the acid than the insoluble carbonate of lime or magnesia commonly employed; and this is the great object in the first part of the treatment. No harm can possibly result if the solution be given at short intervals in small doses. The use of oil is very beneficial, as it tends to decompose and form acid soaps with the vitriol.

Medical Intelligence.

BIRKENHEAD CHARITABLE INSTITUTION.

A Maternity Charity has been lately established at Birkenhead, for affording relief and accommodation during and after their confinement, to poor married women of Birkenhead and its environs. There are three honorary medical officers, Mr. Stevenson, Dr. Orpen, and Mr. J. Smith. The objects of the Charity are highly laudable, and appear to us to be deserving of imitation in other quarters. Medical services are, it is true, given gratuitously; but the restrictions are of such a kind as will, we hope, effectually prevent abuse.

We copy the following from a prospectus before us:—

"None will be admitted except such poor persons as are not able to pay for competent attendance, care and medicines, at their own homes; nor any, except those whose character and conduct are certified, by a subscriber, as respectable and good; and who will conform to the rules of the house.

"No patient will be attended to, except on the written or printed recommendation of an annual subscriber, collector, or donor to the funds, for the support of the charity; and only such poor persons will be prescribed for, as are unable to pay for advice, and are not members of sick clubs. And as the funds increase, medicines also will be provided gratuitously, for such as are so poor as to find it difficult to purchase them for themselves and children."

The diseases of women and of children exclusively, and vaccination, will be attended to daily at the institution.

PROGRESS OF THE CHOLERA.

The Times correspondent at Aden, of the date of June 3d, furnishes the following statement on the progress of this disorder.

"The cholera, which broke out so suddenly and unexpectedly on the 6th ult., has now almost disappeared. Only a few mild cases appear at intervals, from which the patients mostly recover. This happy and favourable change may be attributed to the setting in of the south-west monsoon, with its usual accompanying high winds and increased temperature, the thermometer in most houses ranging as high as 102° in the shade! We confidently look forward to the total disappearance of this dreadful epidemic in a very few days. It has been destructive in its effects; during the brief period which it has raged at Aden 400 inhabitants of the town have fallen victims—17 European soldiers, 7 Sepoys, and 30 camp followers, natives of India, have also perished. The proportion of recoveries to deaths is as one of the former to five of the latter. The shipping in the harbour, men-of-war and merchant vessels, have lost a few men from the same deadly disease. An English bark which left Aden on the 21st ult. in prosecution of her voyage to Moulmein, put back on the 23d. On anchoring it was ascertained that Captain Thomas Maxwell, the master, had died on the previous day from cholera. From accounts received from different places it appears certain that cholera is rapidly spreading through every part of Yemen, accompanied with fearful mortality. From Maculla and other ports to the eastward of Aden the same melancholy accounts have been received. It has reached Mocha, Jidda, Jambo, and almost every other port on the Arabian shore of the Red Sea. I expect to hear by the next steamer of its having reached Suez and other places in Egypt. No intelligence has yet reached Aden of the appearance of the scourge on the Abyssinian coast. I have instituted inquiries, and from all that I can collect on the subject, I have every reason to believe that the cholera appeared, but not in so severe a form (collapse), in 1832 and 1833, and that it travelled by the same route as it is now doing. There is therefore every reason to fear that it is rapidly approaching Europe, and that it will soon be observed on the European side of the Mediterranean, from which it will, I fear, continue to spread through every state, and most probably cross the English Channel. It would be well for the public authorities to adopt early and prompt measures to meet the emergency, should it unfortunately occur, to enable the poor to obtain that immediate assistance which this horrible disease so urgently requires. The Asiatic cholera is by far the most formidable disease which has hitherto attacked the human race. No rank is free from its attacks. The rich and poor, young and old, all have alike become its victims. I believe no quarantine laws, however wisely constructed, or however rigorously carried into effect, can stop or delay its onward march. All human barriers are totally useless. It traverses sea and land in its destructive course. It is not contagious (?) but might perhaps become so where ventilation and cleanliness are defective, and numbers labouring under the same disease are crowded together. The origin of the disease may depend on local causes, and after a time it may spread and propagate itself by a vitiated atmosphere. This opinion is entertained by many medical men in the east, who have so often seen it under many different circumstances."

THE MEASLES IN THE FARO ISLANDS.

Letters lately received from Thorshaven, the capital of the Faro islands, contain the intelligence that the measles, which had not appeared in the island since 1781, and which in that climate always assumes the character of a terrible epidemic, had broken out at at Thorshaven. Of the 800 inhabitants of that town more than 700 had been attacked by the disease, and it is stated that there were only two medical men, so that the greater part of the patients were left without assistance. From 10 to 15 persons daily fell victims to the malady. The only persons spared were the native old men, who had had the disease in 1781, and the foreigners who have been attacked by it in foreign parts. The town of Thorshaven presented a most mournful appearance. The shutters of almost all the houses were closed, and the streets entirely deserted. The plague was already beginning to spread in the rural districts, in some of which it had put a complete stop to sheep-shearing and other agricultural operations, to the great loss of the inhabitants, who have no other resources but the produce of the sale of their peat for firing, and of their wool. The Government was about to despatch a vessel to Thorshaven with the necessary assistance. —*Times*.

THE STUDY OF PATHOLOGY—FORMATION OF PATHOLOGICAL SOCIETIES—THE PATHOLOGICAL SOCIETY OF LONDON.

ONE of the marked features of medical science in the present day, is the desire to extend and cultivate our knowledge of pathology. Chemical research and the microscope are earnestly devoted to this object, and with a success which the occasional contributions to this and other medical journals amply testify. The proper study of pathology is the true path of rational medicine. It will in the end prove a death-blow to homœopathy, hydropathy, and some other forms of latent quackery which appear to be daily becoming more and more rampant. The profession, and more slowly the public, will be thereby induced to see how little influence, except of a prejudicial kind, these modes of quack-treatment exert upon the physical condition of diseased structures. We quite agree with Dr. J. H. Bennett* that those who wish well to their profession should show the sincerity of their views by encouraging "the habitual use of specula, stethoscopes, pleximeters, sounds, microscopes, and every instrument capable of bringing the products of disease under the immediate cognisance of the senses, and thus rendering diagnosis exact." They are also bound "to encourage the study of pathological anatomy on rational grounds, that is, by examining all the organs in every case, investigating into the minute structure of every morbid product, and by obtaining a chemical analysis of these and of the blood whenever this is practicable."

It is with some satisfaction that we find Pathological Societies are now springing up in many parts of the country. In our last week's number, we inserted a report from a society of this kind recently established at Manchester. The report comprised four interesting papers on pathology. We hope to be able to continue these reports monthly.

We have now before us the prospectus of the Pathological Society of London. In this we find the following statement, in the truth of which all will agree :—

The field for the cultivation of morbid anatomy and pathology afforded by the hospitals, dispensaries, and other medical charities, and by private practice in this metropolis, may safely be said to be unrivalled : at present, however, in the absence of any society devoting itself to these branches of medical science, numerous important and interesting observations, not possessing sufficient novelty to merit independent publication, become known only to a limited portion of the profession resident in the particular locality in which they occur. It will be the object of the Pathological Society to collect the scattered observations, and to render them more generally available to the profession, more especially to those who, being actively engaged in its practical duties, have not the opportunity of attending the demonstrations of morbid anatomy in our different medical schools. Such a society will also, it is conceived, prove highly advantageous to the students of the various hospitals, and will afford them opportunities of instruction in this department of medical education scarcely inferior to those possessed in several of the continental cities, and which have gained for those schools of medicine so deservedly high a reputation for the study of pathological anatomy.

It is further contemplated by the Council of the Pathological Society, that especial attention shall be paid to the preservation of accurate records of its proceedings, including a full description of all specimens submitted to the notice of the society, and a statement of the views they are intended to illustrate, together with a reference to the museums in which the preparations are deposited ; and thus, not only will a large amount of valuable information be accumulated, but the records of the society will form, as it were, a general index to the important contents of the various museums in London, both public and private, and will afford the greatest assistance to all who are engaged in pathological investigations.

Should the Pathological Society meet with the anticipated support of the profession, its members will have frequent opportunities of personally inspecting and examining specimens of the more common forms of morbid structure, and will, occasionally at least, have submitted to them examples of those lesions which are of rarer occurrence ;—they will thus not only be rendered familiar with morbid anatomy, but will possess peculiar advantages for th study of that much higher branch of medical science—Pathology.

---

* Monthly Journal of Medical Science, July 1846, p. 27.

The plan and objects of the society may be understood from the nature of the following resolutions :—

1. That a Society be formed, to be denominated the Pathological Society of London. 2. That the special object of this Society shall be the exhibition and examination of specimens, drawings, microscopic preparations, casts, or models of morbid parts, with accompanying written or oral descriptions illustrative of pathological science. 3. That in the remarks made in reference to specimens exhibited, all discussions on abstract points be as far as possible avoided; and that the topics of diagnosis and treatment be not introduced further than is necessary to illustrate the pathology of the subject. 4. That an accurate record of all the proceedings of the Society be preserved, and that abstracts of the same be published at the discretion of the council. 5. That all specimens be at the disposal of the exhibitors,—the Society not contemplating the formation of a museum. 6. That any member having a specimen to exhibit shall give notice to the secretaries before the hour of meeting, and that the secretaries shall exhibit specimens forwarded to the Society by those who are not members. 7. That the Society shall consist of Honorary, Resident, and Non-Resident Members; and shall be under the management of a President, Eight Vice-Presidents, a Treasurer, Two Secretaries, and Twenty other Members, who shall constitute the Council. 8. That every resident member shall pay the sum of one guinea annually. A further fee of one guinea being required, on entrance, of such gentlemen as shall join the Society after the commencement of its operations; and that all subscriptions be paid in advance. 9. That the meetings of the Society shall take place twice in the month, on the Tuesday evenings (alternating with the "Medico-Chirurgical Society,") from October to June inclusive. 10. That all legally qualified practitioners, and persons distinguished in other departments of science connected with medicine, shall be eligible for nomination as resident members. 11. That practitioners residing beyond the distance of ten miles from the Post Office be associated with the Society as non-resident members, on communicating their wishes to the council,—upon whose recommendation they will become eligible for election. That non-resident members shall pay a life subscription of two guineas. 12. That the council shall, from time to time, recommend to the Society for election as honorary members, distinguished cultivators of pathological science resident in this or other countries. 13. That all elections shall be by ballot, and the votes of one-half the members present shall be necessary to the validity of the election. No election shall take place unless twenty-five members be present. 14. That any gentleman wishing to become a resident member, shall be recommended, on personal knowledge, by not fewer than three members. The recommendation after being read shall be placed before the Society during two consecutive meetings, the ballot taking place on the third from that at which the nomination is made. 15. That if any candidate be unsuccessful at the ballot, he shall be considered ineligible for re-nomination for twelve months. 16. That all the officers of the Society shall be elected annually, by ballot, and that no member be deemed eligible for the office of president or vice-president more than two years in succession. 17. That on the night of the first meeting of the Society in January annually, a general meeting of the members shall be held for the election of its officers for the year ensuing; and for the reception of a statement of the receipts and expenditure during the past year. The council shall have the power of convening a general meeting of the members whenever they may deem it expedient. 18. That the council of the Society shall meet once a month for the transaction of its ordinary business—five members to form a quorum. 19. That the following members constitute the officers of the Society for the year ensuing :—

President.—C. J. B. Williams, M.D., F.R.S. *Vice-Presidents.*—Benjamin Guy Babington, M.D. F.R.S.; Richard Bright, M.D. F.R.S.; John Clendinning, M.D. F.R.S.; John Forbes, M.D. F.R.S.; J. Moncrieff Arnott, Esq., F.R.S.; Cæsar Hawkins, Esq.; C. Aston Key, Esq.; Robert Liston, Esq., F.R.S. *Treasurer.*—James Copland, M.D. F.R.S. *Council.*—G. H. Barlow, M.D.; J. Risden Bennet, M.D.; J. E. Day, M.D.; George Johnson, M.D.; H. Bence Jones, M.A. F.R.S.; T. B. Peacock, M.D.; Richard Quain, M.D.; F. H. Ramsbotham, M.D.; G. Hamilton Roe, M.D.; W. H. Walshe, M.D.; John Avery, Esq.; George Busk, Esq., F.R.S.; Edward Cock, Esq.; P. G. Hewitt, Esq.; T. Wilkinson King, Esq.; Richard Partridge, Esq., F.R.S.; Benjamin Phillips, Esq., F.R.S.; John Simon, Esq., F.R.S.; Joseph Toynbee, Esq., F.R.S. *Secretaries.*—Edward Bentley, M.D.; Nathaniel Ward, Esq.

We have no doubt that this Society will speedily meet with that support from the profession, which, in our judgment, it deserves. The first meeting will take place on Tuesday, the 20th of October.

THE INVENTOR OF THE OBSTETRIC FORCEPS.

A CORRESPONDENT has forwarded to us the following piece of information, which may interest the medical antiquary.

The invention of the obstetric forceps is ascribed to Dr. Peter Chamberlain, who was born on the 8th May, 1601, and died on the 22d December, 1683, at the advanced age of 82 years. The invention was lost at his death, and a mere legend remained of his having used some mechanical contrivance to assist the birth of the child in difficult labour. The doctor resided at Woodham Mortimer Hall, in Essex, and it appears that about a quarter of a century ago the then proprietor of the house ordered a closet on the garret-story to be cleared out. Whilst the servant was engaged scrubbing the floor, the mistress observed the appearance of four circular plugs of cork, fixed in the floor so as to form the angle of a square surface of about three feet. These were removed, and the heads of screws were found beneath them; on removing these a square piece of the floor was readily raised, and found to be the trap-door of a crypt, about two feet deep. In the receptacle was found a curious medley, consisting of several pairs of obstetric forceps (Dr. Chamberlain's cherished secret), a quantity of laced dress-gloves, trinkets, some coins of the reign of Charles I., some household account-books, and a packet of love-letters. The forceps were given to Dr. Baker of Maldon, and he presented a pair of them to Dr. Blundell. They nearly exactly resembled the instrument since known as Dr. Haighton's. It is curious that in another house in the neighbourhood, a pair of forceps of the same kind as those found in the crypt in Woodham Mortimer Hall, was found concealed in the chimney, wedged in the brickwork, and only discovered when it was pulled down for the purposes of repair. The care taken by Dr. Chamberlain to conceal the secret of his success is really very remarkable. Our correspondent was informed by the father of his patient, the present possessor of Woodham Mortimer Hall, that Dr. C. resided at the Hall up to the time of the civil wars, when he was expatriated on account of his adhesion to the royal party. It is supposed that he concealed the forceps, and the private memoranda found with them, before he left England.

In the churchyard, adjoining the house, stands among the tombs that of Dr. Chamberlain, with a curious epitaph in verse, written by himself. We extract the following from the inscription on the north side of his tomb:—

"The said Peter Chamberlen took y^e degree of Doctor in Physick in severall Universities both at home and abroad, and lived such above three score years, being Physitian in ordinary to three Kings and Queens of England; viz. King James and Queen Anne, King Charles y^e First and Queen Mary, King Charles y^e Second and Queen Katherine, and also to some foreign princes, having travelled to most parts of Europe and speaking most of y^e languages. As for his religion was a Christian, keeping y^e commandments of God and faith of Jesus, being baptized about y^e yeare 1648, and keeping y^e 7th day for y^e sabbath above 32 years.

"To tell his learning and his life to men
Enough is said by here lyes Chamberlen."

FATAL HÆMORRHAGE FROM LANCING THE GUMS OF AN INFANT.

A CASE is reported in the last number of the Lancet* in which it appears an infant bled to death owing to a very *free* incision of the gums over the incisor teeth of the lower jaw. If the description be correct, the incision was certainly very free. A practitioner who did not make this incision reports the case; and, after having tried alum, nitrate of silver, cold, and pressure without effect, he appears to have given it up as hopeless; and we gather from the report that the child was left for three hours without any medical assistance! It is not at all surprising that it should have died. With whom rests the blame it is the business of the coroner to inquire.

We refer to the case at present, because we find no mention made of what we have found to be a very effectual styptic in hæmorrhages of this kind, namely, the use of the essential oil of turpentine on a pledget of lint, kept over the bleeding surface for a short time by moderate pressure. We have known the most obstinate bleeding, following the extraction of a tooth and continuing for some hours, arrested by the use of oil of turpentine in the manner described.

THE ARTESIAN WELLS OF LONDON.

AN interesting paper was lately read at the Institution of Civil Engineers, on the effect of the deep wells of the metropolis on the supply of water in the London basin, by Mr. Frederick Braithwaite.

The object of this paper was to direct attention to the fact, that the numerous deep wells sunk in and near the metropolis were gradually draining the chalk basin, and that every additional well driven in search of water had the effect of diminishing the water level in all the wells already existing; as a proof of this fact, it was stated, that in a well at Combe's brewery, sunk twenty years ago, the water rose at that time to within 70 feet of the surface, but that it now only rose to within 120 feet, showing a diminution of 50 feet. From this and other instances, it was argued that the supply of water was rapidly decreasing, and this was attributed as well to the improved under-drainage of the lands which received the falling rain as to the increased demand upon the springs. The deep springs, therefore, were shown not to be inexhaustible, and that obtaining water from them was attended with considerable expense and uncertainty; it was argued thence that it was necessary to consider very carefully any attempts for obtaining a considerable supply of water by means of wells from the chalk of the London basin. A remarkable fact also shown in one of the tables was, that on the 5th of April, 1832, there occurred a sudden depression of 18 feet in the level of the springs, which lasted for half an hour; at the end of which time 13 feet of the 18 were regained. Dr. Buckland remarked on the increased temperature of the water in the exact ratio of the depth; the sympathy between the depression of water in the various wells throughout an extensive chalk district, proving the identity of origin of the supplies. As the number of deep wells was, therefore, constantly increasing, the extra pumping upon one of them necessarily affected all within a certain distance around it. He had further observed that the surface line of subterranean sheets of water was not horizontal, but inclined at a considerable rate, in consequence of the friction of the strata through which the water descended.

---

* July 4, p. 24.

ROYAL ACADEMY OF MEDICINE.

M. Malgaigne has been elected by the Royal Academy of Medicine to fill the chair rendered vacant by the death of the late Baron Larrey.

FEES FROM A PASHA.

According to the *Gazette Médicale* M. Lallemand did not fix any sum for medical attendance on Ibrahim Pasha, during his residence in the south of France. Ibrahim himself proposed paying down 100,000 francs (£4000); and early in May he sent his secretary with this sum, for which M. Lallemand gave a receipt, without making any remark, but obviously with a discontented air. When Ibrahim was informed of this he sent another 50,000 francs, making in the whole 150,000 francs, or £6000! It is reported that a smile of satisfaction now began to appear upon the face of this fortunate son of Esculapius; but this grasping at fees appears to have led to a rupture between Ibrahim and a relative of M. Lallemand's, who was about to receive a lucrative appointment from the Prince, and to accompany him to Egypt.

Out of Scylla into Charybdis. So soon as Ibrahim had freed himself from the extortion of a surgeon he fell into the hands of a Parisian dentist, whom he had unfortunately employed to make four teeth for him. Ibrahim thought that a payment of 6000 francs (£240) would be a sufficient remuneration. M. Rogers, the dentist, whose name has already figured in these pages[*], probably thinking that he might not again have an Egyptian prince for a patient took this sum only as an instalment, and gave a receipt, which the secretary mistook for a complete acquittance. In about a week afterwards the enterprising dentist sent in a charge of 9000 francs (£300) for a set of teeth! In the impulse of the moment Ibrahim said that to spend so much money on his mouth was literally eating up his fortune, and he declined paying. He was threatened with law-proceedings, when he compromised the matter by paying 3000 francs (£120).—*Gaz. Med.* 4 July.

⁂ As these statements appear in a respectable medical journal we suppose we must take them as true. If so, Ibrahim is not likely to forget his French surgeon and dentist, who may very appositely be described as first-rate *écorcheurs.*

PRELIMINARY STIPULATION FOR MEDICAL FEES.

Mr. Mason informs us that in Glasgow the practice is quite common for medical men to stipulate for the payment of their fees before attending to the calls of parties to whom they are strangers[†]. The following case shows that a similar practice prevails in France, although the refusal to attend on the non-payment of the fee, is illegal.

A physician of Gignac was required on the night of June 1st to attend two Piedmontese, who had been wounded in a scuffle. In one, the intestines had escaped from the wound. Before entering the cottage to which the wounded persons had been taken he stipulated that his fee of *sixty francs* should be paid to him. This was not done, and he went away, leaving the two men in great suffering. He was then ordered to dress the wounds by a Commissary of Police, but he refused. For this refusal M. J. V. Monge (it may be as well to preserve the name of this physician) was summoned before the Police Court of Martigues, and fined *ten francs* (8s. 4d.), and costs!

⁂ If any fine were inflicted for conduct of this kind on the part of a medical practitioner, it should have been at least equal to the amount of the fee. A fine of 8s. 4d. could have been no punishment for such gross inhumanity! Professor Sava, in his work, "*Sui Pregi e Doveri del Medico*," tells us, that "a great physician is *the first of men*: by the improvements with which he perfects the art of healing, he becomes the benefactor of humanity; and by the empire he exercises over death, he is in some degree the image of the divinity upon earth." We are also told that he should be superior to the petty calculations of sordid interest. It is quite clear from the above case that this "ideal" of a physician does not exist in Dr. Monge, of Gignac!

---

[*] Vol. xxxvii. p. 1018.

[†] Vol. xxxvii. p. 1102.

CAN FEMALES LEGALLY ACT AS DENTISTS?

THIS knotty question, which the author of "Woman's Mission" has left unsolved, has been recently brought to a practical issue before the Correctional Court of Brussels. Madame —— had procured a dentist's diploma from the Medical Commission of Hainault. On her arrival at Brussels, this document was presented to the Medical Commission of Brabant for formal recognition, the lady persisting, in the meantime, in the exercise of her vocation. Legal proceedings were taken against her for the unlawful practice of the healing art. The public prosecutors insisted upon the infliction of a fine, as defendant had no license to practise in Brabant: but the tribunal decided, that as the visa of her diploma had been improperly refused, and the accused had conformed to the provisions of the law so far as it was in her power, no penalty could be inflicted upon her.—*Gaz. Méd.* July 4.

ALLIANCE OF PHYSICIANS WITH DRUGGISTS AND QUACKS.

M. SABATIER has been recently convicted before one of the Parisian Courts of illegal practice. It appears that in order to protect himself he had formed a partnership on joint profits with a regular physician, who was to allow his name to be attached to the prescriptions; and with a druggist, who was to supply medicines. The druggist was acquitted; M. Sabatier, the quack, was condemned to a month's imprisonment, and to pay a fine of thirty francs; while a similar fine, without imprisonment, was inflicted upon the physician, Dr. Dormer.—*Gaz. Méd.* July 4.

If the law of England rendered this sort of partnership penal we fear that informers would find full employment in this metropolis. We cannot exactly perceive the equity of punishing the quack more severely than the physician. Deprivation of his degree and expulsion from the profession would be the proper punishment under the circumstances.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, June 27.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	654	Males....	464	Males....	493
Females.	699	Females.	426	Females.	475
	1353		890		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number*;—*Registrars' Districts*, 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	137
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	171
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	166
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	178
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	238
Total	890

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Springs; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	890	892	968
SPECIFIED CAUSES	887	886	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..	150	162	188
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c. of uncertain seat	112	98	104
3. Brain, Spinal Marrow, Nerves, and Senses	150	155	157
4. Lungs, and other Organs of Respiration	230	271	294
5. Heart and Blood-vessels	28	26	27
6. Stomach, Liver, and other Organs of Digestion	91	65	72
7. Diseases of the Kidneys, &c. ..	7	7	7
8. Childbirth, Diseases of the Uterus, &c.	14	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c.	10	6	6
10. Skin, Cellular Tissue, &c.	6	1	2
11. Old Age	30	60	67
12. Violence, Privation, Cold, and Intemperance	59	25	26

The following is a selection of the number of Deaths from the most important special causes

Small-pox	6	Convulsions	44
Measles	14		
Scarlatina	14	Bronchitis	27
Hooping-cough ..	23	Pneumonia	37
Diarrhœa	35	Phthisis	139
Typhus	30	Dis. of Lungs, &c.	12
Dropsy	9	Teething	11
Sudden deaths ..	17	Dis. Stomach, &c.	6
		Dis. of Liver, &c.	9
Hydrocephalus ..	25		
Apoplexy	26	Childbirth	7
Paralysis	23	Dis. of Uterus, &c.	4

REMARKS.—The total number of deaths was 2 below the vernal and 78 below the annual average. The deaths from Zymotic diseases, with the exception of diarrhœa, were below the averages. The deaths from Diarrhœa were 35, the fatal cases under 15 years of age being 33! The weekly vernal average is 6. In the North and South districts, the mortality was above the vernal average. In all the others, it was below: and, it will be observed, that the deaths were within 2 of the average spring mortality.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer .... 29·51
„ „ Thermometer[a] .... 61·2
Self-registering do.[b] ...... max. 112·6 min. 41·
„ in the Thames water. — 75·8 — 70·5

[a] From 12 observations daily. [b] Sun.

Rain, in inches, 0·52: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 2·5° above that of the mean temperature of the month (58·7°). The extreme hebdomadal range in the self-registering thermometer was 71·6°.

ROYAL COLLEGE of SURGEONS.

Gentlemen admitted Members.

Friday, *July* 3.—J. Lander.—S. W. Burbury.—J. Walsh.—W. Evans.—M. H. Clayton.—E. Hall.—J. Robinson.—J. Yoeman.—B. Lister.—J. Clegg.—T. James.—D. P. Barry.—T. B. O'Donnell.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

Thursday, *July* 2.—Thomas Francis Janson Mountsorrel.—Joseph Cooper Martin, East Hothly, Sussex.—Robert Thornton, Hong-Kong.—John Hillman, Bewdley.—Robert Douglass.—Edmund Welby Apperly Day.—Thomas Osborne Walker, Crick, Northamptonshire.

GERMAN MEDICAL WORKS

RECENTLY PUBLISHED.

Archiv für Syphilis und Hautkrankheiten, mit Einschluss der nicht-syphilitischen Genitalaffectionen, in Verbindung mit Herrn Dr. H. A. Hacker in Leipzig, Dr. J. Rosenbaum in Halle und Dr. Fr. A. Simon in Hamburg. Herausgegeben von Dr. Fr. J. Behrend.—Handbuch der praktischen Chirurgie und chirurgischen Anatomie von Dr. William Fergusson, Professor in London. Mit steter Berücksichtigung der neuesten in- und ausländischen Leistungen, deutsch bearbeitet von Dr. Siegmund Frankenberg.—Ueber die Krankheiten des Darmkanals von P. A. Piorry. Aus dem Französischen von Dr. Gustav Krupp.—Dr. Detroit, Cursus der Geburtshülfe mit Einschluss der wichtigsten Krankheiten der Schwangern, der Wöchnerinnen und der neugebornen Kinder, für Aerzte, Geburtshelfer und Studirende, nach der Paragraphen-Abtheilung in der Geburtskunde des Dr. L. S. Weiss und nach den neuesten Erfahrungen der Wissenschaft bearbeitet und mit einem ausführlichen Inhaltsverzeichniss versehen.—P. A. Piorry's Diagnostik und Semiotik. Mit vorzüglicher Berücksichtigung der neuesten mechanisch-nosognotischen Hülfsmittel. Aus dem Französischen von Dr. G. Krupp. 3 Bände (neue Ausgabe).—Handbuch der Kinderkrankheiten von Rilliet und Barthez. Aus dem Französischen übersetzt von Dr. G. Krupp.—Physiologische Anatomie des Menschen von Dr. L. Fick, Profess. der Anatomie zu Marburg. Erläutert durch 213 vom Verfasser gezeichnete Holzschniite.—Lehrbuch der Chemie, zum Gebrauche bei Vorträgen, so wie auch zum Selbststudium für Mediziner, Pharmaceuten, Landwirthe und Techniker. Fässlich bearbeitet von Dr. Willibald Artus, ausserordentlichem Professor an der Universität zu Jena.—Magazin für physiologische uuk klinische Arzneimittellehre und Toxikologie. Von Dr. J. Frank. Erster Band. Erstes Heft.—Rosenmüller's Handbuch der Anatomie des menschlichen Körpers, zum Gebrauch der Vorlesungen. 6te, durch Prof. E. H. Weber verbesserte und vermehrte Auflage.—Bernt, J., systemat Handbuch d. gerichtl. Arzneikunde.—Cartellieri, die Heilkrafte des Kaiser Franzenbad bei Eger.—Carus, C. G., Atlas der Cranioscopie, 2 Parts.—Henle, J., Handbuch d. rationellen Pathologie, Vol. 1.—Heyfelder die Heilquellen von Würtemberg, Baden, des Elsass u. d. Wasgau.—Kiwisch von Rotterau, F. A., Beitrage zur Geburtskunde, Vol. 1.—Klencke, lexical.-therapeut. Taschenbuch für d. Arzt. am Krankenbette.—Kreussler, E. Therapie acuter und chronischer Krankheiten, nach homoeopath. Heilprincip. bearbeitet.—Mahir, O., über Irren-Heilanstalten, Pflege und Behandlung der Geistes-kranken.—Mayer, J. A. das nichtauffinden der Harnsteine nach gemachtem Steinschnitte.—Schmalz, E., Beiträge zur Gehör. und Sprach Heilkunde, Part 1.—Schultz, C. H., natürlisches System der Pharmakologie nach dem Wirkungsorganismus d. Arzneien.—Siebold und Stannius, Lehrbuch d. vergleichenden Anatomie, 3 parts.—Stiebel, S. F., klinische Vorträge, Part 1.—Verhandlungen der Gesellschaft für Geburtshülfe in Berlin, Vol. 1.—Wernher, A., Handbuch d. allgemeinen und speciellen Chirurgie, 3 parts.

BOOKS RECEIVED for REVIEW

Since May 8th.

Liston's Practice of Surgery—Tuson on the Female Breast—Prieger on the Waters of Kreuznach—Brigg on Strictures of the Urethra—W. J. Preston on the Open Surgery Question—Mr. E. Lee on Medical Organization and Reform—Dr. G. Burrows on Disorders of the Cerebral Circulation—Dr. W. A. Guy on the Health of Towns as influenced by defective Cleansing and Drainage—Malgaigne's Manual of Operative Surgery, by Dr. Brittan.—Report of the Lunatic Asylums of Ireland—Dr. Aldridge's Lectures on the Urine—Manuel complet de Médecine Légale, par J. Briand et Ernest Chaudé, 4ème edit.—Twelfth Annual Report of the Poor-Law Commissioners—Dr. E. A. Parkes's Remarks on Dysentery and Hepatitis—Meade's Manual for Students—Fletcher on Cruelty to Animals—The British and American Journal of Medical and Physical Science—Annual Report of the Royal Edinburgh Asylum—Introductory Lecture to a Course of Military Surgery, by Sir G. Ballingall—Dr. Griffith on the Characters of the Blood and Secretions—Rapport à l'Académie Royale de Médecine sur la Peste et les Quarantaines, par M. le Dr. Prus—Dr. T. A. Wise's Commentary on the Hindu System of Medicine—Dr. J. M. Coley's Practical Treatise on the Diseases of Children—Dr. W. Geddes's Clinical Illustrations of the Diseases of India—Mémoires pour servir à l'étude des Maladies des Ovaires, par Dr. A. Chereau—Quelques Considérations en reponse à l'examen de la Phrénologie, par Dr. Wolkoff—The Economy of the Animal Kingdom, by Emanuel Swedenborg, translated by the Rev. A. Clissold, 2 vols.—Hooper's Physician's Vademecum, by Dr. W. A. Guy—Biographical Sketch of the late Dr. Graham, by Dr. C. Ransford.

NOTICES to CORRESPONDENTS.

The letters of a "Constant Reader" and a "General Practitioner" shall appear in our next number.

Private answers will be returned to those correspondents whose contributions are not here noticed.

The papers of Dr. Rees on Bright's Disease, and of Mr. S. Hare on Angular Projection, will be inserted next week.

Received.—Mr. J. Stuart (Bombay Army).—Dr. Wardell.

Lectures.

A COURSE OF LECTURES ON ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

By Prof. Faraday, D.C.L., F.R.S., &c.

Lecture III.—May 9, 1846.

Chemical affinity.—action of copper on nitric acid,—decomposition by equivalents,—oxidation of zinc,—variable affinities for oxygen,—relations of chemical affinity to heat and electricity,—precipitation of copper on iron and silver. Voltaic phenomena,—transference of electro-chemical power,—conductors and non-conductors of current electricity,—how affected by the current,—action of Wollaston's pair of plates,—intense heat produced,—construction of the Voltaic pile,—its power in the original and improved apparatus compared,—decomposing action in one direction. Grove's battery of forty pair of plates,—action of the current on charcoal,—vacuum light produced without combustion,—combustion of silver,—ignition of platina,—effects of the current on a compound wire of platina and silver,—combustion of mercury and iron,—the current arrested by sulphur, phosphorus, and other non-conductors,—conducting power increased by cooling,—platina melted by cooling part of the conducting wire on ice,—slight effect of current electricity on the electroscope,—low intensity of the current,—action of water,—chemical action of the battery and machine contrasted,—quantity of electricity from the machine small, its intensity great,—the reverse in the battery,—measurement of the relative effects of electricity from the machine and battery.

We have a force which we call *chemical*, and which is exerted especially between substances of different kinds. I think it convenient in a case of this kind to bring this force immediately before you, and from that we will proceed to follow and trace it in the forms in which it will identify itself with that which you saw brought forth by the electrical machine. In this large glass I have put a little copper, and here I have aqua fortis. If I bring these two bodies together by mere contact in the glass, after a short time a peculiar action will take place, which you will recognise by the effects that ensue, and the hissing noise and great heat produced. The orange fumes are all evidences of an action due to a peculiar force in nature. The word force is so defined as to express the cause of any of these new actions.

Now, in this case, the force which is active is a species of *attraction* between the copper which I put in the flask, and the acid that I added to it. It takes place between the minute particles of the two bodies on contact. It is manifest that it cannot be due to any force that the particles of copper have upon copper, or acid upon acid, but it is by their conjunction that this new effect is brought forth, indicating the force there acting and belonging to the particles of copper and acid. It is a strictly attractive force. It has taken a certain amount of this compound to constitute a new body, as we can easily determine by an examination of the product.

Now of all the powers of matter, not even excepting gravitation, this particular force seems to be as intimately connected with the particles of copper as it is possible for it to be. Copper, wherever taken from, or in whatever state it may be found, will have the same kind and degree of force when brought into contact with the acid. The power seems so definite as it is attached to this and other substances that chemists are in the habit of identifying in the bodies with which they deal a certain amount of force, and express it by the term equivalent; atomic weight being also used to indicate the proportions in which bodies react upon each other. Nothing seems more definite and sure than this inevitable connection, at all times, of the force and the quantity of matter. I must not go to the multiplied proofs of this power, for it would take volumes of books and years of lecturing to point out how the accumulation of chemical force is manifested in all the various forms of combination.

Now, in order to bring you a little nearer to the manner in which this force is worked out, I can show you another case. Here you have that same chemical force exerted between a metal and the air (iron). There are two metals which have so much affinity for a substance in the atmosphere that they will take fire and burn as ordinary fuel. If I cannot burn this zinc in my hand, I shall burn it in this jar of oxygen. This is a common effect of what we call chemical affinity, and I am about to show you that especially with these metals, it can be exerted in a very high degree. Here I have another metal (platinum); if I put aqua fortis upon it, although in thin leaf, not the slightest action will take place. Although there be chemical affinity in platinum and in aqua fortis, yet there is not the same power between these bodies to produce the action that I have just shown you. Copper is moderately strong; platinum is not strong at all; but zinc is ver

strong in its affinity for oxygen; indeed, it is among the strongest of the metals in this respect. When I take this zinc, and light the end which is touched with sulphur, you see how it burns. The zinc burning in the air or oxygen, produces this curious white flocculent compound, called oxide of zinc. The result of this combination of oxygen on the one hand, and of zinc on the other, is due to the chemical force of which I am now speaking. Notwithstanding this force is thus known to be tied up so closely in the particles of matter, yet very soon, by proceeding through the paths of science which have been opened by philosophers, we find certain indications of a transference of power. When you come to heat, you have force and transference of power. I always speak in common language; I am not going to theory, or rather hypothesis. You transfer the heat from body to body by certain means very necessary to us. I have here a solution of copper. The copper has been already combined with acid, and if I take two or three substances, and put them into this solution, I can give you another illustration of chemical force. If I put in silver and leave it there, I find no change, and we say there is no exertion of chemical force between a salt of copper and metallic silver. There are many cases where the force is present, but restrained from acting under the condition in which the body is placed. That is the case here; there is no exertion of force; if there had been, you would have seen the silver altered. If I put in a piece of iron there is an immediate change, and it will soon come out covered on its surface with copper in every part. Here, then, is an instance of chemical force in action. Now, if I put these two substances in, keeping them from touching, the effect will be the same, except that the two cases are going on conjointly in the same jar, and the iron comes out still more coppered, but the silver remains the same as before. But if I make them touch each other in the solution, and if I keep them there a little time, to my surprise, and to your surprise, if you reason about the thing, there begins to be an appearance of copper upon the silver. You see there a certain appearance of redness on the silver taking place. If I leave the two bodies for a certain time in contact, I shall have a greater redness from the deposit of copper. But to make it more apparent, I have put into a dish a portion of the copper solution in a purer state; it does not produce the slightest effect on the silver, but the moment I immerse in it a substance which will act strongly—I will take zinc, putting it in without touching the silver—I cause no difference, but touching it, as I am now doing, you will see in a few moments what the effect will be. We have
now altered the condition of the silv
have coppered it, as much as we did th
not by changing the silver, but by a
ference of the power from the zinc, w
effective on the silver with which tl
has been in contact in this solution
that, to our great surprise, we find
a transference of power which it is d
to understand. We can get at the r
but we cannot comprehend the way in
the force, tied up definitely in the z
transferred through the solution to the
It is one of those facts of nature, one o
regions of knowledge, which is most
beyond the reasoning powers of man.
case he thinks of the final cause of all
and can only say, it is so ordained;
laws work out certain results, but we
follow them beyond that point in wh
see the results themselves.

When we come to examine this c
condition of things, we find another
which is not merely a transfere
chemical power from the zinc to the
but a transference that takes place tl
substances themselves, not at all con
otherwise than as conductors of the
I will take this long wire to connect
two silver plates. I have here a p
silver, and a piece of zinc, which will
reciprocal relation to the solution
copper in the glass, and the zinc w
It does act, throwing down the copp
black powder. The silver cannot act
if I put this in separately, and k
separate, no action on the silver takes
but the moment communication is
and the circuit or connexion of the pl
the wire is completed, copper is de
on the silver, just as when the zin
touched the silver plate in the solution
silver now has the same power of sep
copper as the zinc, and when I take
its surface is covered with the metal.
has been a transference of the power
exists in the zinc, and which comes ou
and is carried by that long wire through
distance to the silver. If I take a piece
and put it between these two plates—
if I unite them by glass instead of n
wire, and introduce them into the solu
then no effect of this kind takes plac
silver remains perfectly indifferent.
might bring the glass connexion with
10,000th part of an inch of the zin
yet no transference of power woul
place. I might put phosphorus, or
silk, or any of those substances wh
found to confine this particular k
force, and they would have the same
whereas any bodies that convey eff
electricity from the machine are found
have the remarkable property of carryin
this chemical force, or transferring i
one metal to another. How this m

large our ideas of the properties of matter! for we discover an identity of power where we think there is none. Every few years there are new discoveries unsettling all our previous opinions, and making us acquainted with some new views of nature. I do not know but what hereafter we may find gravitation in some degree altered by the oscillation of force from particle to particle.

Now, strange to say, when we examine this kind of force, we not only find that bodies first inactive become active, but we find that the wire, or the body which conducts the power, is also affected. In order to show this, I will take the experiment of Wollaston, because I am desirous of gradually building up our knowledge by experiment. In his experiment Dr. Wollaston put copper and zinc into the solution, and caused the power derived from the zinc to be transferred to the copper through a short metallic wire. I am now about to take a very short wire, showing how the conductor is affected; and there is such a transference of power that it is not only exhibited on the two bodies, but the wire itself is concerned in exhibiting the new phenomena. Here are the zinc and the copper, and a vessel containing a strong acid. There is no action on the wire until it is brought in contact with the zinc, but if I make contact, which I can do at pleasure by the small wire, then this conducting wire is affected in such a way as cannot escape your notice. I will first put the two metallic plates into the acid liquid separately; they are not touching each other; the copper is not active, the zinc is. I now make communication; the connecting wire becomes immediately red hot, and the copper is now active. If I break that communication again, the copper returns to its own natural state without relation to the zinc. If I bring the plates in contact again, the connecting wire is again made red hot, and we can obtain that effect from every part through which the power runs. The electricity cannot travel off without there is a medium for it to flow through; and then every part through which it runs becomes more or less affected.

These two or three experiments will serve to fix your attention on chemical force, and direct it to the circumstances under which we are able to make this force transferable like electricity—the wonderful force which Volta obtained from the instrument which he invented.

I will first show you how Volta contrived a method for accumulating this power. I have only used a piece of zinc, and silver, or zinc and copper, whereas he discovered by experimenting, how to make many pieces of zinc and copper, or silver, combine in producing strong action. I am about, very roughly, to build up a voltaic pile, which will consist of these three bodies—zinc, copper, and acid—put in a certain and constant order, and you will see how the action of these will be combined. We have taken the copper and zinc and made them touch, and you may have as many successive layers of this sort as you please. My object is to unite them; to affect the silver and copper by the transference of the power of the zinc to the copper. We give the copper a stronger influence by putting between the plates a substance soaked in acid; this is equivalent to putting the plates into acid. The copper is on the lower, and the zinc on the upper side, and every other pair of plates is just in the condition of zinc and copper in the galvanic trough. Every time we add a fresh pair of plates we are increasing the energy with which the power will travel through the wires, and at last we shall connect the bottom and top of this chemical combination. These are the same substances, employed on the same principles that we did in the jar, but in a different way. I have now perhaps twenty or thirty plates. I can easily by the wires which I have adjusted, bring the top and bottom plates into association. When we have done so, we find other kinds of action. If I have proper conducting wires, and charcoal, I shall be able to show a little light. There is a little spark, and that spark is independent of heat. There is actually a stream of power passing across the little interval between the one charcoal point and the other, very like the electric spark that you have already seen in the machine. It is a transference of power through the apparatus, and through the conducting wire, by the arrangements brought cut in this particular manner. My object is to show how Volta first procured what was obtained in a much better way afterwards. You will soon find that we have chemical action taking place, because if I take these two glasses, or these two plates, neither of which has any power on that copper solution—for being both platinum, and therefore alike, they have no action—if I take these plates, and make them part of the apparatus, I shall get a curious kind of action, because I get copper upon the one plate, and not upon the other, and the longer I keep these in, the more distinct will that action become on the one platina plate and not on the other. It is evident that I here have a transference of power, because there is the copper deposited on the platina on one side; but strange to say, I do not find that both plates have a deposit of copper on them, although connected.

This is an important fact to us, because it points out this circumstance, that if there be a transference of chemical power through this apparatus, it must be a peculiar kind of transference, since it only gives a force of that particular kind *in one direction*. But when we examine it minutely there are other chemical forces, which I will show you by and by on a much larger scale.

We thus find a curious condition developed, and the further we proceed in these beautiful branches of science the more we are startled by the occurrence of phenomena quite new in themselves. We get a certain power from heat, then a chemical power transferable, and we think we have attained a perfect knowledge of the subject, until we are led to the further discovery that there is a power on the one side quite different from that which is on the other. It has a close relation to the resinous and the vitreous electricities. But I must not enter into it until I have prepared you to see that the same arrangement renders one body influential on one side, and not on the other. I have rapidly entered upon the description of the voltaic battery, but I do not want you to look at the extraordinary instrument,—I wish you to look at present at the condition of power in it: for that reason I have taken this stepping-stone to bring you to the action of the battery.

Now I will show the perfect battery itself. It is not merely that we have a transference of force, but the great point in connecting electricity and magnetism is to be able to exert this power to an enormous extent. I am raising your minds up by degrees, so as not to startle you when I tell you what is the amount of power which is available in the highest state of magnetism and electricity, and identify their true and indissoluble relation in almost every phenomenon of nature.

Here is the apparatus by which I am about to show the effects of the voltaic pile—the voltaic pile of Grove's construction, because, when this was discovered, philosophers could easily investigate and examine it. We have not taken the earlier kinds of batteries, because, for my purpose, they merge into the battery of Grove, in which the chemical force is brought up to the highest condition consistent with the exhibition of power in this transferable or current form. I should like to show you some of the old batteries which we had as stimulants to genius, but I am obliged very much to abridge my remarks in these lectures. There are in this apparatus forty alternations of the two metals. I am using as a battery, zinc on the one hand, platinum on the other; and, to excite the chemical action of the zinc, we are using sulphuric acid: this acid brings it into the best condition for a current state. I am also using platinum, which does not act on the acid itself. It is in this way that Mr. Grove has formed his battery. Forty pair of plates are all which I shall employ to show the phenomena. They are so arranged as to wait for us;—scarcely a particle of action is going on at present, but all is waiting until we bring these two extremities of the circuit together; and the moment I do so, all becomes immediately active. As we have the means of transferring the force from its origin to a distance, we will rather take this pile to ascertain the comparative degree of power thus brought out, than go back to the battery which is sometimes employed. Here I give you a specimen of a voltaic battery, not a large one, but the best for our purpose—that is, it gives us an abundant supply of this current force, or chemical affinity. I have not completed the circuit, but I am about to do it at this part of the apparatus, and then we shall draw a spark. There is an exhibition of power (the most intense light was produced by contact of the charcoal points);—this is just an increase in the effects which you saw produced by Wollaston's plates. The result is magnificent, when you see it in this manner. Observe the intense power of the light; it is almost too bright to look at, and if looked at long, it hurts the eyes, causing pain and inflammation. I cannot now shut my eyes without seeing ocular spectra so clearly that I could draw them on paper before me. Now that you have seen the spark in the air, I will put two pieces of the same substance (charcoal), which is a good conductor, into a vessel from which the air is entirely removed, in order that you may see that there is a perfect separation from the external air, and that we can obtain the light better even than we did in the atmosphere. I have only to make these two wires connect the extremities; then I can, by making contact below, get, in the vacuum before me, the splendid result that we have had in the air. There is the spark, and a beautiful phenomenon it is. There is a discharge through a visible space of air. There is an interval between the two points of charcoal, and the discharge going on from one to the other, producing a light like the sun. At the same time there is a chemical action going on in the battery: the moment I stop this chemical action, then the brilliant light ceases.—[This experiment was an illustration of the vacuum light—*i. e.* light without combustion, and depending entirely on the intensity of the electric current.]

The light in vacuo is produced almost entirely upon the surface of the charcoal, and not between the points. Here (in the air) we have sparks and flames between the points, because the intense heat causes the charcoa to burn in the atmosphere. I am now about to send the current between two pieces of silver: different substances modify the light The spark between two pieces of silver i of a beautiful green, and we have plenty of light.

Now, let us again look at this power under another form—as it affects the body which it is traversing. For this purpose I take a platinum wire somewhat thinner than that which I use to convey the power in these experiments, and you will soon find how much the wire will be affected in the same manner as the small wire placed between Wollaston's apparatus. Look at the wire; it is so hot I cannot hold it; there is the current running through the whole of that wire, and it is taking its course through it precisely as in Wollaston's wire. If I shorten the wire, I get the remaining portion more intensely heated, from which you may infer that these wires exhibit a certain resistance to the transit of the power, because the wire is not heated so much when it has gone through the whole length as it is when it is going through a part. I should like to show the effect of using wires of different metals having different conducting powers. Here is a wire composed of two different metals, silver and platinum, and the two wires are of the same size. It is a comparative experiment with regard to two wires as to the effects produced by the current. Look at the difference between the platinum and the silver as it regards the liability of being affected by the same power going through them; the platinum is red hot, while the silver is not even rendered luminous. Whatever goes through the wire must have equal power, yet you observe how different are the effects of this current, which appears as heat, but which is really a visible current of chemical force or electricity.

If these wires are combustible, of course they burn in air, and the combustion is often exceedingly beautiful. Here is a portion of iron wire burning, and the manner in which it is first heated and then burnt is striking. The second effect is merely a consequence of that heat which the current of power has given it during the time it passed it. There are other forms under which this experiment might be made, for there is no end to beauty and variety if we had time to go into them; but we must at present attend to the philosophy, not to the individual parts of the subject.

You see I have made a basin of mercury come into the circuit; when I complete the communication it takes fire and burns. If I take a portion of silver leaf, you will see better what is the appearance of the combustion of the silver than you did in the use of the two points of silver. When you see these phenomena, reflect on the wonderful power of electricity transferred from a distance. Here is the mercury now rising and burning against the charcoal which I hold upon the surface.

In order that you may perceive the force of the observation I made a little while ago, you will find that the smallest portion of matter, which will not conduct electricity, will entirely stop this remarkable action, and many of those bodies, which seem to conduct it well, can do nothing of the kind here; although they can burn iron and silver. If I take a piece of iron I can burn it with perfect facility, except the difficulty of holding it; yet if I take such a substance as sulphur or phosphorus I cannot even set fire to it by the current. If I put the smallest piece of paper between these two substances, in one part of the circuit the current is stopped. See how beautifully the charcoal burns if I hold it against the wire. With the paper between the charcoal, however, it is indifferent; if I take it away, I get the power immediately in such a degree that I cannot handle the charcoal. The smallest film of silk stops this current. There is one very curious condition here, which I should like to show you, as regards these wires, and which I think I shall be able to show with platinum wire, because it points out the reason why we philosophers have to take not merely the simple facts, but pursue them in all their variations. The manner in which we heat a wire red hot you have seen, and I will show you again. The whole of that wire (a yard long), can be heated red hot, but it can be more intensely heated if I cool a part of it. If I put a loop of the red hot platinum wire in a basin of cold water, that portion which is out of the water will shine a great deal brighter. If I take part of this red hot wire, and lay it over it a piece of ice, I shall raise the temperature of the other part, not in contact with that, so highly as actually to melt it. It is part of a beautiful experiment of Sir H. Davy, in which he shows that the effect of cooling a metallic wire was to make it a much better conductor. I will first heat the whole wire; now I begin to cool a part with the ice, and by this means, as you will perceive, I very quickly fuse the other part. It is not only an illustration of the singular variety which this power takes in certain conditions, but it shows a particular relation between heat and cold and the current of electricity, which I shall by and by have occasion to compare with certain other results. It has been thus shown that heat and cold can affect the power which is brought forth through the influence of electricity. I hardly know where I may select an experiment to give you the shortest and best view of the character of this power, but I think I had better direct your attention for a few moments to its feeble effect as compared with common electricity. I will assume this is electricity, but if I come to examine it by these gold-leaves of the electroscope, I find scarcely any indication of its presence. The only way in which we can make it sensible is, of course, by its effect upon an apparatus of this kind. We take all the instruments which philosophers have invented for the purpose of exalting the power, using condensers, and everything else to bear on the phenomenon of attraction and repulsion, and bring it up to the highest degree, and then we shall find indications of that power. I will make the experiment to see if it is here; it hardly can be, because I am touching the table, which is interfering with the conduction, but in the apparatus I am now able to show it is electricity, because there are the leaves diverged. You will observe how very feeble this current electricity is when compared with that quality or power which we have exhibited by attraction and repulsion from the machine. We shall get the repulsion now, and I will show the attraction also by taking two gold leaves, and putting them in a proper condition for this purpose. Here are two gold leaves, which are isolated, and which are connected the one with the one handle, the other with the other. The moment I make it part of the circuit, I see that the two leaves are slightly affected. They perceptibly incline towards each other. By this little apparatus I bring them together, and I hope you will see them gradually go together. When we have got to a certain distance the two leaves will not repel each other as if affected by the same kind of electricity, but will show the effect by attraction. There they go together. Then, when I make the contact complete, they burn by the discharge that takes place. Again, another experiment for the sake of giving you a little proof of the small amount as to *intensity*, and the enormous amount as to quantity. Here is a jar of water; this electricity is so feeble in power that that water which conducted it as it was travelling from the machine is not able to carry it off. If I put these two wires in the water, the water does not conduct the current; there is the electric spark leaping across the water when I bring them near to each other. It is clear, therefore, that the power which these two wires can convey is not carried off by this body of water between them; therefore water is a bad conductor. But you shall see that we have the power to make it a bad or good conductor on the application of certain principles, of which I will give an instance. Here is pure distilled water, with which I fill up that jar, then I add some acid, and make the acid water part of the circuit, and now there ought to be no spark on completing the circuit, the acid water easily conducting the current: there is no effect. A little acid or salt, by thus rendering the water impure, will give to it a power of conduction which pure water does not possess. The addition of oil of vitriol has enabled the water to conduct away the electricity. It is in this way that we can vary the conducting power of substances in an extraordinary degree, attending to the peculiar properties of the substances we employ for that purpose.

I must now take you very briefly to one or two points regarding the amount of this power. That this instrument exerts chemical affinity in causing the burning of bodies in contact with air is quite obvious. I must take you rather to the consideration of certain results which will enable us to compare this power with other bodies.

Now there is a sort of experiment that will serve for our purpose. The substance with which I imbue this piece of paper (iodide of potassium) is a body easily acted upon chemically; there is an appearance which soon gives indication of its presence. The power is about to bring forth a body in abundance here. Here are two detached platinum plates, which, if I lay on a paper dipped in the solution of iodide, produce no effect; if, however, I make them parts of a circuit, I get a great chemical effect, which will be of a certain kind as regards the current, because the two plates will not produce the same effect. If I put the one, I get no effect, but when I put the two, and that only for a moment, look at the chemical change that has taken place. How striking is the effect! Iodine deposited at the positive pole.) The force is manifested by one plate, and not by the other, so that the slightest touch at this end of the apparatus is quite sufficient to produce the chemical separation of iodine. So long as I do not make them touch the circle I can get no effect. Now, to come to the machine, we can get the same effect, but after all it is so minute that it is hardly worth your seeing; however, I will take that paper and a portion of the same solution, put it upon a plate, and then put these two platinum plates to cover this large surface; if I put them thus about that paper, and then connect the machine with one of these plates, you will see that the current from the machine will run, by this arrangement, down that wire, through the damp paper. If the machine be turned about twenty times, I shall get a similar decomposing effect on the solution by the large machine that I have here. I shall be able to repeat, in the same way, by the machine, the simple effect I repeated by the battery. There is now one small spot coated with iodine: it is proportionate to the quantity of electricity that passes from the machine to the solution. The amount of power in evolving iodine, or other substances, is the true measure of the quantity of electricity going from the machine. Remember, for a moment, the difference in the power of these forms of apparatus. Although you have little power of diverging the leaves by the battery, yet you have an enormous amount of current in proportion to the effect thus produced. There is a large quantity of electricity in this case as compared with what the machine can do. From the machine we procure electricity of a very intense character as to attraction and repulsion; and from the battery we have the largest amount of electricity as to the *quantity* that can pass through good conductors. I made, several years ago, some researches into the proportion of electricity that was contained in a certain quantity of a substance; say a grain of water. The amount of electricity contained in a single drop of water, measured by chemical affinity, and by the evolution of a current of this kind, is equal to the quantity contained in 800,000 discharges of that large battery of Leyden jars. Before you leave, I will give *one* discharge, to show what it is. This calculation was made in 1833, and I would not refer to it, but it has been recently strongly confirmed by a French philosopher: therefore I do not hesitate to put this result before you as true. *Eight hundred thousand* discharges of a very large battery of Leyden jars are equal to the electricity contained in a single grain of water; and by Groves' battery we can decompose the grain of water and pass its constituents all through our hands in the course of five seconds of time. The conductor is now giving proof that it is becoming ready for the discharge which would suffice to kill a good sized cat.

TO COVER PILLS OR EXTRACT OF COPAIBA WITH GELATINE.

THIS process, invented by M. Garot, is exceedingly easy and practicable, and it is surprising that it is not employed more generally in this country, as it much more effectually disguises the taste and odour, and interferes less with the solution of the medicine, than the method of gilding or silvering usually practiced. It is applicable to every substance capable of a pilular consistence; such as balsam, camphor, musk, assafœtida, mercurial and ferruginous preparations, &c. Two hundred pills can be coated with gelatine in an hour, and will be ready for use after the lapse of two hours. The pilular mass so coated remains soft for a much longer time than according to any other plan. The process is as follows.—Fix the pills on long, fine pins; plunge them into thick purified glue placed in a hot-water bath; then remove them by a rotatory motion, and stick the pins in paste spread out on a slab, so that the pills may remain elevated in the air; as soon as fifty are thus treated, rotate them individually in the heat of a taper, to harden the external pellicle; pull out the point of the pin, and the process is complete."—*Dublin Hospital Gazette.*

A COURSE OF

LECTURES ON DENTAL PHYSIOLOGY AND SURGERY,

Delivered at the Middlesex Hospital School,

BY JOHN TOMES, ESQ.

Surgeon-Dentist to the Hospital.

LECTURE IX.

Osseous union of teeth to each other.—Union of teeth to the alveoli.—Mechanical injuries. — Fracture of teeth. — Fracture external to the pulp cavity — through the pulp cavity — through the fangs.—Union of fractured teeth.—Dilaceration of teeth.—Injuries of the pulp. — Dislocation of teeth. — Fracture of the alveoli.

Irregularity in the structural relations of the teeth with the adjoining tissues.— It is by no means uncommon to find the fangs of a molar tooth, which are usually separate, united; but further there are many well-authenticated cases where the fangs of two adjoining teeth have been permanently connected. A case occurred in the practice of my friend Mr. Rogers, in which the second and third molars of the upper jaw were firmly united. If my memory does not fail me, the wisdom tooth was decayed and painful. On attempting to remove the offender, both teeth came out, and it was then found that they were united by their fangs. It is probable that junction was effected between the bone or cementum of the fangs. Although such cases are rare, yet there are a sufficient number recorded to establish the fact. Mr. Bell describes several cases from preparations in his own possession. In the American Journal of Dental Surgery, an instance is mentioned in which the lower bicuspids were joined.

Before we leave the subject of dental union, I shall take the opportunity of bringing before your notice a very interesting specimen which I had the good fortune to procure from an ivory dealer.

The tusk of the elephant grows during the whole life of the animal; the older the elephant, the larger the tusk. Usually there is a single tusk developed from each side of the upper jaw. In the specimen before you, three tusks have grown from one side—a large one above, and two smaller ones immediately below. But the great peculiarity exists in this, that the apices of the smaller ones are united to the under surface of the larger one. The union is affected not by the dentine of the three, but solely by the cementum. Each tooth has its separate alveolus and pulp cavity. Portions of the alveoli are still adhering to the surface of the lesser tusks (see fig. 27).

FIG. 27.

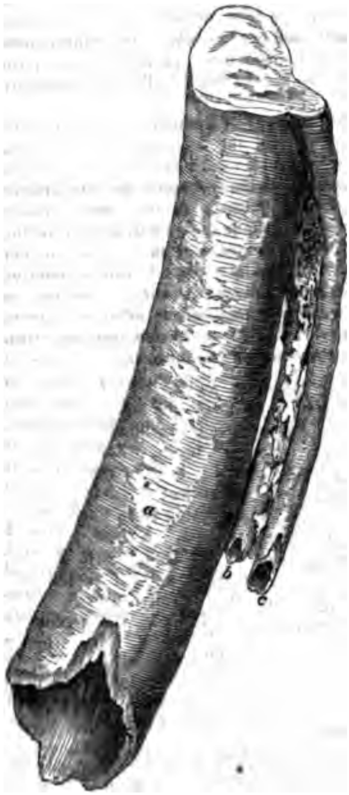


FIG. 27.—An elephant's tusk, with two lesser ones united by their apices, while each has its own proper alveolus and pulp cavity. *a* the normal tusk; *b* and *c* the adventitious tusks.

Osseous union between the teeth and alveoli.—The fact as to whether the fangs of teeth are ever connected to the alveoli by osseous union, is not at present established. I have seen a specimen of a milk-tooth which remained in the adult jaw, and seemed to be united to the bone, but as a section of the parts had not been examined by the microscope the fact could not be considered as established. There seems no reason why union should not, under some circumstances, take place, yet, if such does occur, the cases are very rare, and are therefore practically unimportant.

Mechanical injuries of the teeth—fracture.—The teeth, as well from their peculiar function as their exposed situation, are very liable to be fractured. The fracture may be external to the pulp cavity, in which case it may be termed simple, or it may extend through the pulp cavity, and thus constitute compound fracture. Compound fracture may be confined to the tooth, or may be accompanied by fracture of the alveolus.

Fracture of teeth external to the pulp cavity, or simple fracture, may be produced by the violent closure of the antagonist teeth, by biting any hard substance, or by a blow. If the dentine be exposed, pain will for a time be felt on subjecting the tooth to the contact of cold fluids, or even a current of cold air. A peculiar and distressing sensation is produced by any foreign body coming in contact with the exposed dentine. If left to take its course the pain and sensitiveness may wholly cease, or, on the other hand, the pulp may become inflamed, and the tooth consequently lost.

Treatment.—If the fractured edge of the enamel be rough, or unpleasantly sharp, a fine file should be used. The sensitiveness of the dentine may be destroyed by the application of an escharotic; nitrate of silver, potassæ fusus, or chloride of zinc in the state of powder, may be rubbed over the surface with a piece of wood rendered rough at the extremity, so that it will take up a little of the remedial agent: no doubt, there are many other substances which would answer the purpose. Those I have named will, however, prove efficient.

Fracture through the pulp cavity is of very frequent occurrence, and is usually the result of a blow or a fall. It may possibly be produced by the violent action of antagonist teeth when the muscles of the jaw are affected by spasm; though such a case has not come under my own immediate notice. The fracture may be situated in the crown, or in that part of the tooth which is enclosed within the alveolus, but as the two cases may lead to somewhat different results we will consider them apart.

When the injury has been confined to the crown, the fractured portion will of course be detached, and leave the pulp and surface of the dentine exposed to external influences. After an accident of this nature you will find the pulp projecting from the fractured surface, and extremely sensitive to the slightest touch, even of the tongue. Inflammation will shortly commence in the exposed pulp, from which it will extend to that portion situated in the fang, and from thence proceed to the periosteum of the fang and alveolus. The inflammatory action may not stop here, but may extend further, and involve the periosteum of both the external and internal plates of the alveoli, and also involve the gum. In this case you will find considerable swelling of the face, diffused pain over the parts involved, accompanied with the constitutional signs of inflammation.

If allowed to take its course, the inflammation will terminate in the death of the pulp, and in the formation of pus in the alveolus, which will find its way down the side of the tooth, and be discharged under the edge of the gum, or a canal will be formed by absorption through the alveolus and the gum, and the matter will issue through the opening, which is commonly situated opposite the apex of the fang. Free exit being given to the pus, the inflammation will now abate, and the pain and swelling will subside with the escape of the matter. The tooth will become gradually dark in colour. The secretion of pus will continue, though the quantity discharged may be so slight as to escape notice.

These are the consequences which, if no preventive means be used, usually follow upon a tooth being fractured through the pulp, and the pulp exposed but not destroyed. But if the accident occur in a strumous constitution the results may be more serious; the neighbouring teeth may become involved in the inflammation, and the alveoli suffer necrosis; so that instead of the injured tooth alone being lost, the adjoining teeth, with the inclosing alveoli, may be destroyed.

The pulp may, however, be destroyed by the force which occasioned the fracture of the tooth; thus if the crown be broken off near the neck the pulp will probably be torn out of the fang by the detachment of the crown. On the other hand, the tooth may have been so moved in its socket that the vessels and nerves are severed at their entrance into the fang. In either case there is much less risk of inflammation than where the pulp is exposed to the immediate action of air, and the various substances taken into the mouth. The exposed surface of the dentine is in most cases for a while very sensitive, but the sensitiveness gradually subsides; the tooth becomes discoloured, the discolouration commencing around the vacant pulp cavity, and extending outwards.

In a susceptible subject, however, you may have considerable inflammatory action following much the same course as occurs in those cases where the pulp is exposed but not destroyed.

In the most favourable case there is an attempt at reparative action. If the pulp be torn across half way down the fang, the remaining portion of the pulp will in the course of a little time seal up the exposed aperture of the cavity of the fang with newly-formed dentine, just as we see the cavity obliterated by new dentine in the fangs of teeth which have been much worn by mastication. In the one case the injured pulp withdraws itself from external influence by forming a layer of dentine on its exposed surface, and in the other by adding new dentine to the inner surface of the pulp cavity as the external walls are thinned by wear.

Treatment.—If the fang of a front tooth be sound, and the adjacent parts free from inflammation, a new crown may be pivoted upon it in such a manner that the artifice cannot be detected unless very closely examined, and the crown will answer all the purposes of the original one. (The manner of performing the operation I shall describe to you in a future lecture.) Hence, in many cases it will be desirable to preserve the roots of a tooth from which the crown has been broken. To effect this we must if the pulp be exposed immediately destroy it by thrusting into the cavity a small steel instrument; and when it can pass no further, from the narrowing of the canal as it approaches the end of the fangs, roll it between the finger and thumb: this will completely destroy the pulp soon after its entrance into the tooth; the coagulum formed from the torn and bleeding vessels will protect that little which remains. Having destroyed the pulp we may proceed to fix on by means of a pivot the new crown. Some dentists use platinum, or steel-wire, heated red hot, for destroying the pulp, under a belief that when the actual cautery is used the patient is less liable to an attack of inflammation of the alveolar periosteum as a result of the operation.

Four years since a gentleman had the central incisors broken off by a blow from a ball. I saw him on the same day. The pulp in each tooth was destroyed for some distance down the fang. The stumps were pivoted. No inconvenience followed the operation, and at the expiration of three years the roots of the pivoted teeth seemed perfectly free from disease.

Such should be our treatment if the fang be firm in the alveolus, and the patient applies to you before inflammation has commenced; but if the root be loose, from the blow which fractured the crown, or if the indications of inflammation are present, you should at once extract the root. If there is considerable inflammation about the alveolus, the patient should, after the removal of the tooth, be directed to foment the part freely, by taking into the mouth a strong decoction of poppy-heads, and at the same time an aperient should be given to reduce constitutional excitement.

If the accident has occurred at some distant period, and the now empty pulp cavity has its walls discoloured, it will be inexpedient to pivot on a new crown, as in a probability the cavity gives passage to some slight discharge, which in being blocked in by the pivot will lead to abscess in the alveolus, for the relief of which the root must be extracted. You will in some cases find that pus, instead of passing out through the cavity, makes its escape through a small fistulous opening opposite the end of the root. In such a case pivoting may not make the matter worse, but as disease about the fang of one tooth is apt to extend to the adjoining tooth, it is far better to remove the root.

Fracture of the root.—The root of a tooth, you are aware, is invested with periosteum, and fracture may occur without that membrane being detached, except at the line where the fracture has taken place. The tooth may, therefore, be retained in its place. If, however, the force causing the injury has been great, the fractured part may have been knocked out. The alveolus, by the same blow, may have been fractured, in which case there may be great displacement of the tooth, and in some instances without detachment from its socket. The direction of the fracture may be either transverse or oblique, and may itself be either simple or comminuted. The pulp, if the force causing fracture has not produced much displacement, may be but slightly injured, and vitality therefore preserved throughout its whole length; on the other hand, if the displacement has been considerable, it must be torn across, and that part external to the seat of fracture destroyed.

You will recognize fracture of the fang of a tooth by the crepitus that will be felt on moving the crown. The fractured tooth, if left to itself, will, in many cases, produce inflammation and pain in the alveolus, which may oblige the removal of at least the fractured portion. This will not, however, be the necessary result; the fracture may unite.

It has been believed that union of a fractured tooth could never occur, but the preparation which I am enabled to show you, through the kindness of my friend Mr. Saunders, whose property it is, shows that union not only can, but in this instance has, taken place. The tooth is a central incisor of the upper jaw; the fracture extended obliquely through the middle of the fang, and was obviously attended with slight displacement, in which position perfect union has taken place. Several small nodules of dentine mark the line of union, the oblique direction of which, together with the displacement, are so well marked that there can be no doubt of the producing cause of the present appearance of the tooth—namely, fracture and subsequent union (fig. 28).

A second case of union is recorded in the American Journal of Dental Science, where you will see a wood-cut representing an incisor fractured near the neck, with the crown bent at a right angle with the fang, and in that position united.

FIG. 28.

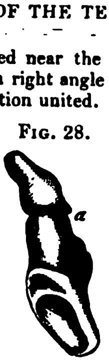


FIG. 28.—A central incisor tooth united after fracture of the fang. *a* the seat of fracture and subsequent union.

It will not be difficult to understand how a tooth fractured through the fang may be united, supposing the pulp be not destroyed by the injury of the dentine. You have seen that when the surface of a tooth is worn, the pulp forms dentine in the cavity opposite to the worn external surface, and I shall show you that when a tooth becomes decayed, the pulp will, in some cases, form dentine in the pulp cavity, opposite to the seat of the disease situated on the external surface. The process of development in the two cases is similar to that engaged in the formation of the dentine of the body of the tooth. In each case we recognize reparative attempts, and also an unquestionable proof that where there is dental pulp, there we may have, under favourable circumstances, dentine developed. If, then, a tooth be fractured through the fang, and the pulp be not destroyed, a process may be set up similar in every respect to that effecting the union of fractured bones.

If we examine osseous union we shall be able to trace the following steps up to the completion of the process. Thus, the immediate consequence of fracture of a bone is the effusion of blood from the lacerated vessel of the injured part; this is followed by effusion of liquor sanguinis or lymph; the formation of cartilage between the fractured extremities then succeeds, and after a while the cartilage is converted into bone, and the union is complete. Similar action would no doubt arise when dental union takes place, but instead of cartilage we should have dental pulp, which would be converted into dentine. Numerous specimens of hypertrophy of the cementum attest that whenever there is dental periosteum there may be formed dental bone or cementum. The bony layer of the fang may, therefore, under favourable circumstances, be united.

Treatment.—If the fracture be situated about the middle of the fang, or near the neck, and the body of the tooth be knocked out, the remainder of the root, if painful, should be extracted; but if a small portion of the fang only remain in the alveolus, it is not well, unless it be painful or loose, to attempt the removal, as the operation would be attended with considerable pain. A small piece of root very seldom gives any inconvenience, and is, after a time, by the deposition of bone in the alveolus, brought towards the surface and thrown off, or it may be impacted in bone, and there remain without giving any evidence of its existence. Such has evidently been the case in the specimen before you; the bone is here closely fitted to the surface, even to a somewhat irregular fractured surface. Had there been any inflammation excited by the presence of the fang, we should see evidence of its existence in the adjacent bone. Instead of that, however, the texture of the bone immediately in contact with the root is free from unusual porosity common to inflamed bone, and is exactly similar to other parts of the maxilla.—(Fig. 29.)

FIG. 29.

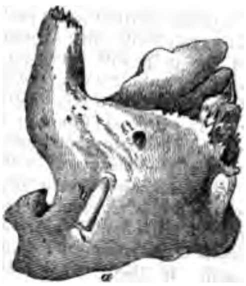


FIG. 29.—The left upper maxilla, with the root of a tooth imbedded in its substance. *a*, the alveolar line, the alveoli themselves being absorbed from age; *b*, the root of a tooth closely embraced by bone.

Again, a small portion of the fang of a fractured tooth may wholly or in part become absorbed. It must not be denied, however, that, in a few cases, the remaining portion of the fang of a fractured tooth will produce inflammation, and subsequently a gum-boil, which, had the stump been removed, would probably have been avoided. If after fracture the crown be not detached, but yet feels very loose in the gums, it should be removed; or if the gum be inflamed, it should be removed whether loose or not. Should, however, the fractured tooth be tolerably free from pain, and the gum from inflammation, and at the same time be held tolerably well in its place, we may attempt to get an union of the fractured surfaces. If we could insure perfect absence of motion in the tooth, it seems probable, judging from the specimen before us, that union might be effected. It will, however, be extremely difficult to ensure perfect rest in the parts, and we know that even a bone will not unite unless there is perfect absence of motion between the fractured extremities, and much less would a tooth, when the nature of the new tissue, namely dental pulp, is much less firm, and therefore more readily injured than cartilage. From these circumstances our chances of success will, I fear, be small, though I think the chance worth the trial.

If several teeth with their alveoli are fractured, and there is displacement, the whole should be brought back to the proper position, and the patient should be enjoined to avoid all causes of motion in the injured part, which should be fomented, by taking into the mouth hot poppy-head fomentation, which should be renewed as soon as it cools. The general health should also be attended to, and aperients given if necessary.

Dilaceration of partially developed teeth from the formative pulp. — By this I mean the forcible separation of the cap of developed dentine from the pulp, in which development of dentine is still progressing. I have but little experience in accidents of this nature. Dilaceration is of course the result of mechanical violence. Two cases have come under my notice, in which after severe injury to the jaw—in one from the kick of a horse, in the other from a fall—partially formed teeth came away, with necrosed bone. I am, however, through the kindness of my friend Mr. Saunders, enabled to show you a specimen, in which there has been perfect reunion after dilaceration, and the development of the tooth has been perfected.

In this specimen the accident has evidently occurred subsequently to the development of the enamel, and there are also indications that there was slight displacement consequent upon the injury.

There is a distinct line of demarcation between the dentine formed before and subsequent to the accident; indeed, the great distinctness of the line throws some doubt as to whether there is perfect reunion in this tissue. The dentine developed immediately after, and by which the junction or reunion is effected, is perforated by numerous canals, which were probably occupied by vessels, but which, like the vascular canals in the antler of the stag, become partially obliterated on the organ reaching maturity. The thickening or ridge on the external surface of the tooth consists of cementum, in which the reunion is very perfect, and is, I believe, perforated by vascular canals. The pulp cavity, you will perceive, is situated low down in the fang of the tooth, and at the upper part is studded with two small nodules of dentine. I have not seen a specimen which could be viewed microscopically by transmitted light, so that I cannot describe the structure more minutely.—(See fig. 30.)

FIG. 30.

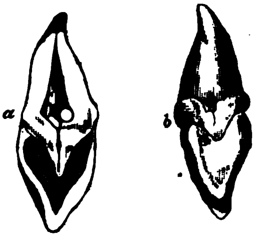


FIG. 30.—A canine tooth united, and the development perfected after dilaceration. *a*, a section showing the pulp cavity and the line of union, which latter is made much more distinct in the engraving than it exists in the specimen; *b*, the external surface of the same tooth.

The subject of reunion after dilaceration, though interesting physiologically, is practically of little value. The accident rarely occurs, and then is either not recognised, or if recognised is involved with such extensive injury of the adjoining parts, that there are no hopes of its coming into operation.

Mechanical injuries of the formative pulp, with partial dilaceration, though unknown in the human teeth, are occasionally met with in the tusks of the elephant, or perhaps I should speak more correctly if I say the results of such injuries are occasionally recognised in the tusks. Most museums possess specimens of tusk, in which balls are impacted, and everywhere surrounded with dentine. On close examination, it will, as far as my experience goes, be found that the dentine near the surface of the ball is slightly peculiar; that it has a translucent horny look, and in some specimens has a laminated appearance.

Before the development of dentine was understood it was extremely difficult to explain how ball should get into the solid part of a tooth. We can now, however, see that if a solid substance be lodged in the pulp, and remains there without producing inflammation, that it must, on the pulp becoming dentine or cement, be enclosed in the solid substance of the tooth, just as it was before enclosed in the pulp. But if the pulp near the foreign body be destroyed, then dentine is deposited at a short distance in such a manner as to enclose the ball loosely in a case, and at the same time protect the remainder of the pulp. The specimen on the table illustrates this point. The missile has evidently entered through the base of the tusk, and passed into the enclosed pulp. The fracture is unrepaired, but a loose case is formed round the ball, with an opening kept from without. This, which shows the marks of the fracture in their outline, has all the edges of the aperture rounded.

Dislocation of teeth.—Dislocation may be partial or complete; that is, the tooth may be loosened considerably, and hang in its place, or it may be so completely detached from its articulation that it falls from the socket. Further, it may be complicated with fracture of the alveolus, or, on the other hand, the tooth may be driven up into the nasal cavity. Mr. Bell cites a case of this kind, which came under his immediate notice. Dislocation is always produced by mechanical violence when occurring suddenly, or by the growth of a tumor, or by deposition of bone in the socket, when occurring gradually. A front tooth is occasionally seen lengthened beyond its fellows; this arises from the gradual filling up of the alveolus from the bottom by the deposition of bone; hence the tooth is forced out, and appears to have lengthened.

If the dislocation be incomplete, and there be no injury to the jaw, the tooth will, if kept quiet, in a patient having a good constitution, become firmly refixed; but, on the contrary, we may have inflammation set up, which will extend to the neighbouring parts, and produce great mischief.

If the dislocation be complete, with but little injury to the alveolus, and the tooth has fallen out, the jaw usually gives but little trouble. It is common for a patient after the skilful extraction of a tooth from an uninflamed jaw to feel no subsequent pain whatever. If the dislocated tooth be driven into the jaw, great pain and active inflammation of the injured part may occur in any case, and will almost surely, if the tooth be not removed.

Treatment.—If a sound valuable tooth be completely dislocated, the alveolus should be immediately cleared of coagulum by the use of a strip of lint and a probe. The tooth should then be returned to its place, and fixed so as to prevent motion, by a silk ligature round the adjoining teeth. The patient should be cautioned against disturbing it by any attempt at mastication on that side of the mouth. By these means a dislocated tooth will often become firmly replaced in the jaw, though occasionally you will have inflammation arise as a consequence of the attempt. In all cases there will be some tenderness, and the tooth will for a short time be elongated and tender; a circumstance arising from swelling of the alveolar periosteum, and consequently slight displacement of the tooth. If, however, the tenderness be great, and accompanied by constant pain, all attempts to induce reunion should be abandoned.

Supposing a tooth to have become quite firm after dislocation, it does not follow that it will continue serviceable for any great length of time. Usually such teeth become discoloured, being partially dead; from the connection with the vascular system existing only through the dental periosteum, and not through the pulp. The consequence is, that gum-boils not unfrequently appear, and these, if severe, may oblige the removal of the tooth; still, I have seen several cases in which teeth removed by mistake were returned to their alveoli united, and were useful for years.

If the dislocation be partial only, the tooth should be pressed back into its proper position, and in most cases it will unite to the alveolar periosteum. There is frequently a little difficulty in returning the tooth when the alveolus has become occupied by a coagulum. Firm pressure should be used, and when in place the tooth should be tied to the neighbouring teeth.

You will have frequent failure, but yet it is always worth while to attempt to save a sound tooth, even if the chances of success are small.

If the dislocated tooth be driven into the antrum, or into the jaw, it should be immediately removed, otherwise inflammation will arise, which may end in necrosis of the injured bone.

Mechanical injuries of the alveoli.—Fracture arises from the same cause, and is usually connected with, fracture or dislocation of teeth. In some cases it is the result of unnecessary force, or force injudiciously applied in the extracting teeth. The extent of fracture will be in proportion to the degree of mechanical violence producing it, and may be confined to a simple fissure, or one or more pieces may be broken off. Fracture of the alveoli is necessarily concomitant with fracture of the jaw; but as this forms a subject in the surgical lecture we shall not touch upon it here.

It rarely happens that slight fracture of the alveoli in a perfectly healthy person is attended with serious inconvenience any further than some slight pain for a few days. If, however, your patient be in an unfavourable state of health, then necrosis of at least the injured portion, if not more, of the alveoli may be feared.

Treatment.—No doubt slight fracture is a very common result of the extraction of the teeth, as well as of other injuries of the teeth; but when the fracture is slight, and is, in fact, nothing more than a fissure, with but little separation, we have no means of ascertaining its existence, neither would the knowledge, could we obtain it, be of any practical value. Should, however, you detect a piece of alveolus broken from its connection with the maxilla, and attached only to the gum, it had better be removed, otherwise it will occasion irritation until it is thrown off by natural efforts.

Two cases have come under my notice where large portions of the alveoli have been torn away with the teeth, and in each the exposed surface of bone exfoliated. In the first case the two bicuspides and canine were removed with the enclosing alveoli in an effort to remove the second bicuspid with the key. In the second case two molars, with their alveoli, were removed in the same manner, and the mucous membrane of the palate torn across as far as the soft palate. The patients applied to the hospital in consequence of the injuries received in the operations.

It is very common for a small bit of the edge of the alveolus to be found adhering to the neck of the tooth after removal. This amount of injury is very seldom of any account, neither need any treatment be adopted.

I need not detain you with any account of necrosis, as you will hear from Mr. Arnott or Mr. Shaw a far better description of that disease, whether situated in the jaw or elsewhere, than I should be able to furnish.

INCOMPATIBLES WITH CORROSIVE SUBLIMATE.

It may be useful to know the vegetable infusions, decoctions, and tinctures, which decompose corrosive sublimate. Any pharmaceutical preparation containing one or more of the following substances will produce this effect; but the rapidity with which the decomposition takes place varies in different instances. 1st. Substances that decompose corrosive sublimate slowly, throwing down calomel: marsh mallows, bitter sweet, calumba, oak-bark, sarsaparilla, quassia, gentian, resin of guaiacum. 2d. Substances that decompose corrosive sublimate instantly, forming particular mercurial compounds: opium, cinchona. The result of the decompositions produced by the first group is to diminish extremely the activity of the corrosive sublimate: thus, this medicine mixed in ordinary dose, with decoction of sarsaparilla, and administered for an indefinite period, will rarely salivate. The decomposition produced by cinchona does not, on the contrary, seem to interfere materially with the virtues of the medicine: we know that one of the most favourite modes of administering corrosive sublimate is, dissolved in tincture of cinchona.—*Dublin Hospital Gazette.*

Original Communications.

OBSERVATIONS ON THE DIAGNOSIS OF BRIGHT'S DISEASE, AND ITS RELATION TO ALBUMINOUS URINE.

By G. Owen Rees, M.D. F.R.S.
Physician to the Pentonville Prison, and Assistant-Physician to Guy's Hospital.

It is not perhaps going too far to assert, that in the present day a large number of the members of our professions have become persuaded of the advantage of examining the urine for albumen in many forms of ailment, which previous to the discoveries of Dr. Bright were unknown as bearing any relation to this urinary derangement.

The value of this test as an indicator of disease of the kidneys, is, however, very differently estimated by practitioners. Some, it is to be feared, overrating its importance, in a belief that it necessarily indicates the existence of a fatal disease; while others, from having noticed recovery from this class of affection, have, on the other hand, too rapidly concluded that the existence of albumen in the urine is by no means a symptom that should cause anxiety as to the result of the case. We ought, perhaps, as part of the history of the subject, to notice another class of the profession (daily, however. becoming less numerous), who are even unacquainted with the frequency of coagulable urine as an accompaniment of anasarca.

The object attempted in the present communication is, firstly, to direct attention to those symptoms which lead to the detection of the morbus Brightii, when the more common effects produced by the disease are either not prominently marked, or altogether absent; and secondly, to notice certain albuminous conditions of urine, which must be distinguished from that form more especially connected with a deranged condition of the kidney.

In relation to the first part of my subject, I may perhaps be excused in remarking upon an error which has materially interfered with the progress of medical truths in all ages, and which still flourishes unfortunately as an effect either of imperfect education or natural obliquity of understanding, to the great detriment of our art. I allude to the notion that we can arrive at a satisfactory conclusion on any part of a subject by reflecting upon what we may have observed previously, and at a period when our attention was not especially directed to such point of inquiry. It is true that we can in some cases at once and safely contradict assertions involving sweeping generalizations, referring to well-known and frequent symptoms; but these are rarely the instances we are called to decide upon, and we must be extremely careful how we pride ourselves on powers of judgment derived from retrospective thought, when considering the truth of observations relating to diseases of organs like the kidneys, and which refer to derangements in the healthy character of a secretion, which, like the urine, is even now very imperfectly examined by practitioners.

Notwithstanding the obvious truth of this, the discovery of Dr. Bright is occasionally repudiated, on the ground that the long experience of an individual has not presented him with cases bearing the stamp of the disease in question: nor is it easy to persuade a particular class of persons of the great differences obtained as the results of observation, according as the mind may be prepared, or, on the other hand, unacquainted with the history of the subject for investigation.

The attention of Dr. Bright was first directed to the subject of his discovery in relation to the presence of anasarca, and few practitioners are now likely to overlook the condition of the urine, as to the presence or absence of albumen, when this symptom is present in any marked degree. The kidney, however, is sometimes diseased, being either in a congested or granular condition without the occurrence of anasarca. Albuminous urine may then be passed, and other certain characteristic symptoms of the morbus Brightii be present, which may, or may not, afterwards become associated with dropsy.

It is important that these symptoms, which, independent of anasarca, point to a diseased condition of the kidney, should be familiar to the practitioner, in order that the disease may be early detected, and subjected to appropriate methods of treatment.

Now it not unfrequently happens that patients present themselves for relief at the hospital, in whom the leucophlegmatic or anæmic aspect is strongly marked. They complain, perhaps, of having taken cold, and feel pain and dizziness in the head, with shooting pains in the loins and down the limbs. To these general symptoms, so often met with in ordinary colds or in influenza, we do not find superadded the excitement of pulse or heat of skin noticed in such affections; on the contrary, the skin is often cool, though dry, and this circumstance, if it be present in connection with *nausea or vomiting* as a prominent symptom, should be sufficient to direct attention to the kidney, and may probably lead us to elicit, on further enquiry, a list of symptoms more or less confirmatory of the suspicion that the organ is in a deranged condition.

The additional evidence we meet with, should the case be as we may have suspected, consists principally in the presence of the following symptoms: puffiness of the eyelids, either sufficiently persistent to be observed at the period of examination, or which may have been noticed by the patient during the first hour or two after rising from bed, but which disappears as the day advances, as an effect of gravitation resulting from the maintenance of the erect or semi-erect position. The urine will often be described as clear, but passed at short intervals, and the patient will remember having been frequently obliged *to rise from bed to micturate.*

This latter set of symptoms (to a knowledge of which we may have attained by acting on an early suspicion principally derived from the state of the stomach complained of by the patient), should at once lead us to examine the urine, and we shall generally find, in such cases, that albumen may be detected in considerable quantity, and the progress of the case afterwards prove that the morbus Brightii is present, possibly in an aggravated form.

I have here described what may be considered as an intermediate case; at least so far as the difficulty of diagnosis is concerned. We often meet with patients who do not answer fully to the description I have given above; while, on the other hand, the less palpable symptoms which I have described as leading to our suspicions, may, on further questioning, lead to our discovering all the confirmatory indications of the morbus Brightii. Thus the endocardium may be seriously involved, such lesion being obvious enough on auscultation, notwithstanding that it may not yet have proceeded so far as to produce urgent symptoms.

Again, inquiry may afford us the history of a long and painful salivation, for which no very laudatory mention is made of the skill and humanity of a former attendant, or patients may even present themselves to us while under mercurial influence, and our inquiries lead to no very sufficient reason for so powerful and sudden an effect having been produced by the drug.

The excessive action of small doses of mercury thus often becomes a valuable guide for the detection of albuminuria, though a painful and injurious result for the patient, and one which no practitioner familiar with the disease would willingly bring about.

There is a severe form of cerebral disease which occurs in connection with the excretion of albumen with the urine, showing some peculiarities of a very marked character, and to which the attention of practitioners was especially called by Dr. Addison, in a paper published in the Guy's Hospital Reports, for April, 1839.

This form of brain affection is characterized especially by the anæmic aspect of the patient, by a quiet pulse, and frequently only partial coma. If there be any stertor it is of a peculiar kind, and characterized by a low hissing sound.

These seizures are frequently attended with convulsive attacks occurring at intervals. Paralysis is not necessarily present, but still may occasionally exist, and anasarca is generally wanting.

This kind of case has been much overlooked; at least, as connected with disease of the kidney; and I will therefore describe the history of a man lately admitted into Guy's Hospital, under the care of Dr. Babington, as affording an instance of a form of kidney disease which might not have been detected by a less accomplished practitioner.

John O'Connel, admitted into Lazarus ward on the 6th of May, 1846. He is in a semi-comatose state. When roused he answers questions with difficulty, and unsatisfactorily. He lies on his back, and vomits frequently. As far as can be ascertained from his answers, the epigastrium and head are the seats of pain. Motion and sensation of the left side of the body impaired; the paralysed side is the colder to the touch; tongue loaded with thick dark-brown fur; eyes staring and vacant. No remarkable dilatation or contraction of either pupil; the right somewhat the more dilated; pulse 76 per minute; respiration appears normal; chest healthily resonant, except perhaps over the pericardial region; heart's impulse rather excessive, somewhat irregular; liver enlarged; bowels constipated; body emaciated; no anasarca. (This condition, notwithstanding the absence of anasarca, at once led to a suspicion that the kidneys were in a diseased state, and further examination shewed this to be the case.) Urine scanty, high-coloured, acid, strongly coagulated by heat, and also by nitric acid: specific gravity 1010.

After some days' treatment this man recovered sufficiently to give an account of himself, and related a history such as is constantly received from persons affected with the morbus Brightii.

These further particulars were as follows:—

He is 34 years of age, married, no children; a weaver by trade: had lived very intemperately till 12 or 15 months ago: used to drink both beer and spirits: until this attack commenced he had always had good health. Is of a healthy family. Six months ago caught cold by sitting at work eight hours in damp clothes: had then severe cough for two months, and swellings of the legs, head-ache and vomiting, from which symptoms he has suffered more or less until the present time.

Cases such as the above are not of very infrequent occurrence, and though the symptoms are severe, they are such as to direct attention so exclusively to the brain that the condition of the kidney but too often escapes detection.

I will now proceed to the second part of my subject, and describe various forms of urine containing albumen, and especially notice that which is characteristic of the morbus Brightii, as it too frequently happens that errors occur in the diagnosis and treatment of renal cases from a want of familiarity with the appearance and reactions of the urine.

In my description here, I shall assume that the presence of albumen in the urine has in every case been satisfactorily established, and shall not enter upon a consideration of the various sources of fallacy connected with each test used by the practitioner, but assume him capable of the task of accurately examining the urine in relation to this important point.

Urine may be excreted in the albuminous condition, owing to the presence of pus, blood, serum of blood, and (to a small extent) the presence of semen in the fluid.

The presence of pus, which is best proved microscopically, may be owing to an excretion either from the bladder, ureters, or kidneys, and therefore that urine which is rendered albuminous by its presence is in no way necessarily characteristic of kidney disease. It is not uncommon to find urine highly albuminous in cases of diseased bladder during the period that pus is pouring from the mucous membrane, and to observe its gradual disappearance in proportion as the deposit of pus decreases, and ultimately to find the urine free from albumen. This occurs, of course, only when the bladder alone is affected; for if the kidney be the subject of congestive or granular disease, we shall observe the urine persistently albuminous even after the deposit of pus has ceased to appear: and it is by attention to this point that we are often able to determine that kidney disease exists in addition to the more obvious and more aggravated disease of the bladder. I do not here allude to sources of fallacy connected with the presence of pus in the chamber-vessel, which is derived from the uterine or vaginal discharges of females: it is well to mention, however, that such sources of fallacy may interfere with our discovering the truth, unless proper precautions are had recourse to; the best possible among which is to use the catheter in order to obtain our specimen for examination.

Urine often contains albumen, owin

to the presence of blood. It is then either of a bright red or dark porter colour. Both these kinds of bloody urine are occasionally observed in the morbus Brightii, and chiefly in its early stages; but they are not especially or necessarily characteristic of it, which may be pretty certainly said of true serous urine.

Serous urine is not to be confounded with that which contains blood; it is free from hæmatosine, at least so far as the unassisted eye can determine; and under the microscope the true blood corpuscles are seen only in very small number. The albumen it contains is derived from the serum of the blood, which passes from the kidney to the almost total exclusion of the blood corpuscles and fibrin.

To come to a determined opinion on the existence of the morbus Brightii, it is necessary that serous urine should be passed for a length of time, and that this should be the great leading feature of the disease, and that if any other form of urine be passed containing albumen, owing to blood or pus, that such circumstances should not be regarded as necessary to the complete history of the case, and moreover to be looked upon as a condition which must be eliminated as a source of fallacy, so far as concerns the production of albumen in the urine, before we can feel ourselves justified in concluding that the kidney is prone to the granular degeneration.

When serous urine has been passed for any length of time, say for weeks or months, and both time and treatment fail to remove its quality of coagulability, we may conclude on the presence of kidney disease.

The probability of a cure being effected in any such case, or, on the other hand, the inevitable fatal termination of the disease, is a subject on which considerable difference of opinion will exist; a discrepancy principally owing to the fact, that we are not yet able to decide upon the exact stage of the disease—to ascertain, in fact, whether or not the congestive condition has yet given place to the deposit of adventitious matter in the substance of the organ. No one would be inclined to deny that the kidneys, which in health are engaged in excreting from the blood a large quantity of effete material, could have their action interfered with for any great length of time by organic lesion, without the destruction of the patient resulting as a consequence; and it is as clearly proved from clinical and pathological observation that the congestive stage of the morbus Brightii, accompanied by serous urine, may exist for some time without being followed by the mottled kidney, and the patient be restored to health under appropriate treatment.

ON THE PRESENCE OF FIBRINE IN THE URINE.

FIBRINE is sometimes present in the urine. Brandis found that of a person affected with scarlet fever to coagulate on cooling. Nasse knew a catholic priest who passed, particularly during the night, a large quantity of whitish urine, that coagulated spontaneously in from ten to fifteen minutes after leaving the bladder, and often, indeed, coagulated in the bladder itself. The patient experienced no debility. On analysis the urine was found to contain a large quantity of fibrine, but no blood-globules. There were also prismatic crystals in the urine, which were found to be triple phosphates.

Dr. Zimmermann has had patients whose urine coagulated by heat, but on applying the proper heat it was found to contain another component of proteine than albumen. He thus describes the urine in which he detected fibrine:—"From patients with inflammatory affections it was saturated, acid, and urinous in smell; in other cases it was pale, cloudy, of a faint sweetish smell, and nearly or altogether alkaline. Sometimes it contained, besides fibrine, amorphous urate of ammonia, or uric acid."

Dr. Zimmermann observed fibrinous urine in endocarditis, pleuritis, pneumonia, inflammatory catarrh, rheumatic ophthalmia, periostitis of the occiput, and erysipelas of the face. In five of these cases, two being rheumatic ophthalmia, and three thoracic inflammation, the blood contained molecular fibrine. In these cases Zimmermann observes that the kidneys were quite healthy. The fibrine appeared in the urine simply as an excretion, sufficient oxygen not having been taken up to decompose it into its organic forms. Our author thinks that, in many cases of coagulable urine, the coagulation will be found to be due to the presence of fibrine quite as often as of albumen. It will be found probably in cases where the cutaneous function is suppressed, as happened in the examples he analyzed, and also be accompanied with fibrinous serum.—*British and Foreign Med. Rev.*

CASES OF

ANGULAR PROJECTION OF THE SPINAL COLUMN.

BY SAMUEL HARE, M.R.C.S.

MISS C. N., aged 13½ years, resident in the county of York, came under treatment 8th October, 1845. She was a fine child when born, and continued to have good health until she had measles, when between seven and eight years of age. She suffered much from the attack, which was accompanied with severe inflammation of the lungs; since then her health has been altogether very delicate, some cough and difficulty in breathing having continued long after she was considered well of the attack.

About a year afterwards, at the close of 1840, it was observed that she stooped forwards and bent towards the right side, while the left shoulder gradually became higher than the right; she was soon fatigued from trifling exertion, and walking became somewhat difficult, as she often stumbled, and sometimes fell from trifling causes. Attention being thus drawn to the spine, it was found that there was a projection of the three upper dorsal vertebræ, and she was ordered, in consequence, to lie down a part of every day.

In 1842 she began to lose the use of her lower extremities, and the paralysis became so complete as to render it impossible for her even to stand: it affected sensation as well as motion. This state continued some months, during which she had frequent spasmodic contractions of the legs, which were involuntarily drawn towards her body: she has of late improved as regards the use of her limbs.

In 1843 she began to expectorate small spiculæ of carious bone, varying in size from pieces nearly as large as a small pea to minute portions not larger than the head of a pin; she has continued to bring up similar fragments to the present time, at intervals of a few days or a week. Their appearance is always preceded by a severe irritating cough, which sometimes continues many hours, but is always relieved when the spiculæ are parted with.

Present state.—The disease of the spine occupies the whole of the dorsal vertebræ, but the projection is formed principally from the fifth to the ninth, both inclusive, the eighth being the most prominent of all. The form of the projection can, properly speaking, scarcely be called "angular," as it is rather that of a very large and prominent oval lump, situated between the shoulders, the spinous processes of the vertebræ being very distinct, and making the surface of it very uneven. The upper part of the spinal column above the carious bones inclines much to the right side, while, owing to this circumstance, and the great projection of the dorsal vertebræ, the ribs are altered both in form and position; the left ones being rounded and prominent, while those on the right are much flattened. From these conditions it results that when standing up she bends very much to the right side, and that between the right arm and the ribs there is a considerable space. Both scapulæ are exceedingly elevated, though the left is an inch and a half higher than the right; and the neck is so short and twisted that her chin rests upon the right clavicle. Her height is exactly four feet.

Her face, and lips especially, are exceedingly pale; indeed, she is altogether very anæmic, and is much emaciated. She complains of great lassitude, and is therefore little disposed to move about: her gait is unsteady and trembling when she endeavours to walk. She is very subject to severe headaches and shortness of breathing, attended at times with wheezing and pain in the right side of the chest. Her appetite is very delicate and variable; her tongue is pale and furred, and the alvine secretions are dark, scanty, and offensive.

There is some dulness on percussion in the right interscapular region; over the left scapula the sound is almost tympanitic—this peculiarity being doubtless produced by the deformity of the spine throwing the chest forwards and downwards, and therefore causing the diaphragm and stomach to be higher in the chest than natural. In the right interscapular region, near the projection, inspiration is somewhat harsher than natural, but expiration is not audible: in the same region there are slight mucous rhonchi. Anteriorly, above the nipples percussion is not so clear on the left side as on the right, except immediately below the clavicles; this is owing to the height to which the diaphragm rises in the chest, and to the heart being consequently displaced upwards: the stomach, indeed, rises as high as the nipple on the left side, below which point that side is tympanitic. There does not appear to be disease of the heart, but this organ, as already stated, is partially displaced, owing to the deformity.

In the treatment of this as in most cases of angular projection of the spine, the following indications were to be fulfilled:—1st. To endeavour to bring the spine as much as possible to its natural position. 2d. To retain it in that position until anchylosis take place. And 3dly, to improve the state of the general health.

For the first of these,—having ascertained, by there being some mobility in the diseased part of the spine, that complete union of the bones had not taken place,—it was necessary that the superincumbent weight of the head and shoulders should be entirely removed from the carious part of the spine. This can only be done efficiently by employing the recumbent position, whilst, at the same time, it is highly advantageous to use gentle extension, which has a tendency to improve the direction of the spinal column, and to maintain the improvement which may have taken place: pressure by the hand and by means of compresses is also to be applied to the projecting parts.

To fulfil the second indication recumbency is equally necessary; for it will be obvious that until anchylosis take place in a more correct position, there must always be a tendency towards a reproduction of the deformity should the patient attempt to walk or move about in the erect position: because then the weight of the head, chest, and upper extremities, would press upon the diseased portion of the spine, which would naturally give way, as before, at the carious point.

To accomplish the third indication, the state of the digestive organs is to be closely attended to, and by a course of alteratives and mild purgatives, with such tonic remedies as may be indicated, so improved, that a more healthy action of these parts may be reestablished.

In this case, these objects were steadily kept in view, and persevered in with the most satisfactory results.

Dec. 24th.—The projection of the spine has already diminished a little in size; she is better of herself; her appetite is good, she passes better nights, and is somewhat stouter than when she came under treatment.

April 2d.—Since the last report she has continued to improve in every respect; the deformity is less, and she feels her back stronger; she has increased in height; she is considerably more erect in person, and there is consequently less space between the right side and arm: the state of her digestive organs is so much altered for the better that for some time past the evacuations have had a healthy appearance. When she came under treatment she expectorated, as has already been stated, some portions of carious bone, and continued to do so every few days or oftener until five or six weeks ago, since which time she has not parted with any of them. I have upwards of thirty of these spiculæ, which, when expectorated, were accompanied with a most severe cough, and with a small quantity of muco-puriform matter. Since she ceased expectorating them she has not had a single attack of her cough, and her breathing has been much freer.

June 8th.—Both shoulders are considerably less elevated, and are reduced to the same level; the chin no longer rests upon the clavicle, but the head can be freely turned in any direction, the neck being considerably increased in length. There is now none of the space between the right arm and side, owing partly to the ribs being less flattened and of a natural form, and partly to the removal of the lateral inclination of the spine. The posterior projection of the spinal column is also very much diminished both in size and the prominence of the spinous processes of the vertebræ which compose it, so much so, that when the patient is dressed the deformity is very little perceptible. She now measures 50¼ inches, having gained 2¼ inches since she has been under treatment.

Since the 2d April she has expectorated but three very minute portions of bone, which were brought up soon after that date; since then there has not been any return of the cough or expectoration. Her health is in the most satisfactory state.

CASE II.—A case of disease somewhat similar to the preceding one, but still more extensive and severe, occurred in the son of Mr. T. B, aged 15 years, who came under treatment September 1st, 1845.

He was very delicate during infancy and childhood, being much troubled with convulsive fits, which sometimes occurred two or three times a day or oftener, and it was seldom he passed a week without them until he was more than twelve months old. When about two years old he had the small-pox, measles, hooping-cough, and scarlet fever, in quick succession—*i. e.* in the course of a few months; afterwards, before he was three years old, he had a fall from a height of from three to four feet, and in the course of a few weeks his mother perceived a projection of one of the upper dorsal vertebræ, which became more and more prominent, while some of the adjoining vertebræ were also soon involved in the disease: shortly after this he had another fall, after which the projection made still more rapid progress. He now suffered exceedingly from spasmodic contractions of his lower extremities—that is, by their being suddenly and forcibly drawn up towards the trunk, especially in the night-time; and these contractions have troubled him more or less to the present time. He now began to lose sensation in his lower limbs, and was only able to walk about with his hands on his knees, and shortly afterwards either laid or sat almost constantly, being scarcely able to move at all. At this time the emaciation was extreme, and his knees and hip-joints becoming more permanently contracted, he commenced the use of crutches, and, with practice and the aid of these, he was in time able to move about, although without them he could not even stand. As he went along he swung between the crutches, but h d not the least power to place one foot before the other; the toes of his shoes were always worn by his dragging his feet after him. From the age of five he has been much troubled in micturition, at times · ot being able to void his urine, while at others it came away from him involuntarily. He has also suffered from the effects of paralysis of the sphincter ani.

For many years he has been subject to a troublesome cough, attended with pain in his left side, and more especially to difficulty in breathing; the latter, particularly if he took a little more exercise than usual, also producing the pain alluded to.

Present state. - He is of a pale sallow complexion, and of a strumous appearance, the upper lip being prominent, and the edges of the eyelids thickened and sore, in which condition they have been since he had the measles. He complains of great general debility, and continues exceedingly emaciated; his power of locomotion remains as before reported: his knees are bent nearly at a right angle, and are quite stiff, whilst their inner surfaces are rough and hardened from the constant friction of one against the other. The hip joints admit of a certain extent of, though not much, motion, and his body is exceedingly bent forwards, in order to bring it (owing to the contraction of the knees and hip-joints) over the centre of gravity. The spasmodic contractions continue very troublesome and severe, drawing up the thighs towards the abdomen, and affecting, indeed, the whole of the lower extremities, which then become painful. He frequently suffers also from numbness and tingling in the limbs; which symptoms often precede the contractions.

The extreme shortness of the spine, resulting from the deformity, can be best judged of by the fact that the length from the occiput to the division of the glutei muscles is only twelve inches. The diseased portion of the spine includes two or three of the cervical, the whole of the dorsal, and one of the lumbar vertebræ; the lower cervical and first dorsal form almost a right angle with the upper cervical vertebræ, so much do they project backwards. and, together with the remaining dorsal vertebræ, form altogether a large, nearly semicircular mass, which projects 5½ inches beyond a line drawn from the nape of the neck to the lumbar vertebræ. His chest is extremely prominent, being what is called "pigeon breasted," and the ribs are straighter than natural, and point downwards, so that the extremities of the lower ones fall over the cristæ of the ilia.

His general health is in a bad state; the bowels are much confined, and the tongue furred and foul; he has an unpleasant taste in his mouth, and has little appetite.

The recumbent position was ordered for this patient, and pressure made upon the projecting vertebræ; at the same time, by means similar to those mentioned in the preceding case, a gradual and easy extension was used, so as to maintain the improvement which progressively took place, while the extension had likewise a tendency to straighten the contraction of the knees: this was also facilitated by his having a pair of knee-caps made, to which, through openings in the reclining plane, small weights were suspended.

These means were perseveringly adopted, at the same time that every care was taken to improve the general health. Though this case was one of the most unpromising I have ever met with, yet a change for the better was soon evident, and by the end of three or four months was very decided.

Dec 20th.—Not only has the progress of the deformity been suspended, but a considerable diminution has taken place in the spinal projection, especially in the direction of the upper dorsal vertebræ which formed the superior part of the hump, and in which there appeared, from the first, to be a greater degree of mobility than in those forming the lower part of the projection. The knees, instead of being immoveably bent at a right angle, now admit of a considerable amount of motion, and the angle they form, when extended, is much less acute.

April 15th.—A cast has this day been taken of his back, the length of which, measured as before from the occiput to the division of the glutei, is now 14⅜ inches, shewing, therefore, an increase in length of 2⅜ inches during the time he has been under treatment; and the spinal deformity, instead of 5⅛ inches, now projects only 3⅜ inches; the upper portion of the hump is exceedingly diminished; the shoulders are comparatively in their natural position; the neck is very considerably longer, and the sternum less prominent.

June 1st.—A great amendment has gradually taken place in his general health, and he has of late become considerably stouter; his tongue has a more natural appearance; his appetite is good, and the bowels have become more regular; he does not now suffer from the cough and dyspnœa, which were formerly so very troublesome; the contractions in his limbs are now trifling, being much less severe and less frequent; the numbness he does not complain of at all: his knees can be got perfectly straight, he is able to stand and even to walk with very little assistance. A still further improvement has taken place in the spinal deformity, so that the posterior projection is considerably less in size than at the date of the last report, while the sternum, owing to the more natural shape of the ribs and the costal cartilages, is far less prominent than before.

Case III.—The next instance of the disease is in a young lady, aged seven years, residing in the county of Leicester.

She was very healthy until three years of age, when she had measles so severely that her life was despaired of, owing to a severe inflammation of the lungs, and she subsequently remained for a long time extremely sickly, feeble, and emaciated.

About six months after the attack of measles, a projection of the spinal column was observed at the lower part of the dorsal region, and from that time to the present the deformity has been gradually becoming worse, the projection having got more and more prominent.

In a few months she began to have great difficulty in walking, the body bending forwards and to the left side, so that, in order to balance herself the better, she was accustomed to place her hands behind her when she moved; she subsequently complained of much pain in her right side, and when she attempted to walk would often drop suddenly and involuntarily upon her knees.

Present state. Oct. 6th, 1845.—The deformity in this case is more decidedly angular than in the preceding ones, and is formed more particularly by the 10th, 11th, and 12th dorsal vertebræ, the 11th being the most prominent: the upper and lower portions of the spine may be considered as two planes meeting at the 11th vertebra, and thus forming an obtuse angle; the chest is consequently thrown much forwards and downwards, so that the cartilages of the false ribs fall over the iliac bones on each side, in such a manner as to give the chest at its lower part a very broad appearance, while at the same time the abdomen sinks inward, its antero-posterior diameter being thus contracted, and the length of the whole trunk much diminished; the right shoulder is higher, and the left lower than natural; her stature is short, being but 39¼ inches in height; her complexion is sallow; she is much emaciated, is exceedingly weak; her appetite is not good; her bowels are confined, and the secretions from them very unhealthy.

In the treatment of this case the recumbent position was employed, with gentle extension and pressure, as in the preceding cases; she was also placed under a course of alterative and aperient medicines to improve the state of the secretions, and the benefit derived under this plan has been very great.

Jan. 6th. — Since October a great improvement has taken place as regards the state of her spine, her body being considerably more erect when she stands or walks; she has also increased an inch in height. A corresponding amelioration has taken place in her general health; her complexion is clearer, her countenance is more animated, she is more cheerful, and her headaches have nearly left her.

June 6th.—The angle formed by the upper and lower portion of the spine at the projecting part is much less acute, and the prominence consequenty considerably less marked; indeed, the projection is now trifling where it was the largest. The state of her shoulders is much improved, being both lower and flatter; her height is 41¼ in., shewing an increase of two inches since she has been under treatment. She is exceedingly well in health, not having any complaints to make; her spirits are good, she enjoys every meal, and sleeps all night.

Remarks.—From the rounded form and great prominence of the projection in the first case, it is evident that there must have been considerable destruction of the bodies of most of the dorsal vertebræ, but as, on pressure and gentle extension, it was found that complete anchylosis had not taken place, the question, in a remedial point of view, became whether it should be attempted to bring about anchylosis in the angular or deformed position, which the spine had then assumed, or whether any attempt should previously be made to bring it into a more natural direction. This is a subject on which some difference of opinion prevails: all, indeed, agree that anchylosis or bony union of the vertebræ is the only permanent cure when caries of these bones has taken place, while it is no less agreed that in any surgical cure deformity should be avoided as much as possible, and at the same time compatible with the safety and well-being of the patient; but some believe that when there is caries of the vertebræ, anchylosis can only take place by the remaining portions of the bodies of the vertebræ being brought into absolute contact, under which circumstance the deformity must of course remain permanent, or, what is more probable, be increased. But the resources of nature are by no means thus limited. When caries of the spine occurs, the periosteum, the anterior common ligament, and the surrounding textures become thickened, so as to form a firm membrane or sac in front of the diseased bones, and thus to prevent the pus which is formed being effused into the neighbouring parts; but should the sac be incomplete, or, from perforation or other cause, allow the escape of the puriform matter, then psoas, lumbar or other abscesses are formed, or the still worse consequences of effusion into the peritoneal or pleural cavities,—a circumstance, however, which happily rarely occurs. If the progress of the caries cease, and the health improve, nature attempts, by the formation of new bone, to repair the injury done, and to fill up the space produced by the greater or less absorption of the bodies of the vertebræ; if the remaining portions be allowed to continue in juxtaposition, union between them taking place, any improvement in the spinal deformity will be rendered impossible; but if the spine, by suitable means, be got straighter, and retained in that position until a healthy osseous deposit take place in the diseased part, the resulting deformity will be much diminished, and sometimes rendered comparatively trifling, and the cure will be both complete and permanent. I have seen these effects produced so often in the most unpromising cases, that I feel no doubt of such a result being attainable in a great majority of instances when complete anchylosis has not already taken place. I may here allude to a case of the kind which I had under treatment seventeen years ago, which I have often seen since, and have heard of recently; it was a good deal similar to the last of the cases I have given above, except that the angle was much more acute in the case to which I am now referring. The patient was, at that time, eleven years of age, and had great angular projection of the lower dorsal vertebræ, with lumbar abscesses; but notwithstanding these, the spine was reduced to its natural direction, anchylosis took place in that position, the lumbar abscesses were absorbed, and she is now a fine healthy person of twenty-eight: the distortion is very slight, and, when she is dressed, scarcely perceptible. This case is instanced owing to the length of time since she was under treatment, and to shew the permanency of the cure.

Although, as a general rule, loss of power in the lower extremities is more commonly met with in the severer cases of angular disease of the spine than in those less advanced, yet this is by no means universally the case; and it is really surprising to what an extent caries of the vertebræ may reach without the supervention of paralysis. In the first of the above cases paralysis had taken place, but had previously been much more complete than when she came under treatment, shewing that it depended upon a removable cause: where, indeed, as is sometimes the case, it is caused by the deposition of ossific matter in the vertebral canal, or by the pressure of a spicula of bone upon the spinal cord, little or no hope can be entertained of recovery from the paralysis; but in those cases where the loss of power over the lower extremities arises from the thickening of the membranes of the cord, or from the effusion of pus, &c. a more favourable result may be anticipated, as these causes are much more likely to be removed by appropriate treatment. Such was the case in the instance No. 2, given above, in which there was likewise some paralysis of the sphincter ani, and probably also of the bladder.

A most interesting circumstance attending the case of Miss N. was the expectoration of the small portions of carious bone, doubtless owing to a communication existing between the sac covering the carious part of the vertebræ, and some of the bronchi. In a chest so distorted the physical signs could not, of course, be expected to be precisely similar to those in a naturally-formed thorax, even were the lungs in each case equally sound: the height to which the diaphragm and stomach rise into the chest in cases of angular deformity renders the lower part of the left side of it much more tympanitic than natural, while the heart also becomes displaced, so as to occupy a situation nearer than natural to the upper part of the sternum, producing in that region an unnatural amount of dulness; but these circumstances being taken into consideration and allowed for, do not, even in such cases, impair the value of the physical signs. Now, in the case we are alluding to, the physical signs were such as not to indicate any material disease of the lungs, although there was dulness on percussion, and some mucous rhonchi in the right interscapular region: the dulness in that situation might be owing to some enlargement of the bronchial glands, but it more probably arose from the sac covering the diseased vertebræ, and containing puriform matter, being sufficiently large to displace the lung in this region to a certain extent from its natural position, and thus to produce a dead sound on percussion, instead of the naturally resonant one; and it is not to be wondered at, that the sac should be larger on the right than on the left side, when it is remembered that the caries of the vertebræ must have been greater on the former than on the latter, as the upper part of the spinal column, besides bending forwards, had a considerable inclination to the right side, which could only arise from the circumstance just alluded to. The irritation produced by the pressure of the sac, acting as a foreign body, would be likely to give rise to some local bronchitis, and would thus account for the slight mucous rhonchi which were present in the right interscapular region; or these may have been produced by the escape of a small quantity of pus into one of the bronchi from the sac, for it seems highly probable that the communication which must have existed between them, in order to account for the expectoration of the spiculæ of bone, was on the right side of the chest, and that their passage into the trachea was through the right lung, on which side of the chest she used formerly to complain of pain.

In some cases of caries of the spine, exciting as well as predisposing causes can be assigned, though the occurrence of the former does not seem to be generally necessary for the production of the disease, and they would seldom, perhaps, be in themselves sufficient, without the existence of the latter. Among the predisposing causes, that general cachexia of the system often left by severe attacks of the measles is a fertile cause of the disease, for in many, I may say in most, cases I have had under treatment, the commencement of the deformity has been dated from a period not long subsequent to the malady mentioned, and the health during the interval has always been reported to be in a bad state: this occurred in all the cases narrated: in the second, indeed, a fall is mentioned; but it must be remembered that the patient had very delicate health, and it is not unlikely that he would ultimately have been deformed even if he had not had the fall, though, without it, the caries might not possibly have occurred so soon, nor proceeded to so great an extent. I say it is not unlikely that he would have been deformed, because in children of feeble constitutions, instances are constantly occurring where no exciting cause can be traced, while comparatively few take place when the previous state of the health has been good.

In the third case the deformity consisted in a decidedly angular projection of the spinal column, constituted as already stated; while there was no hump as in the preceding instances. Such a condition of the spine indicates that there is extensive caries of two or three, but not of many, of the vertebræ; in other words, the spine gives way at the carious portion, while the parts above and below remain comparatively straight, but meet each other at an angle where the caries exists. Such are the instances in which we may hope for the most favourable results, and consequently the least ultimate deformity, providing the treatment be commenced prior to the occurrence of anchylosis, and persevered in until bony union has become established between the remaining portions of the vertebræ.

In cases so severe as the preceding ones, close attention to the recumbent position is necessary, though in milder instances of the disease it need not be used so constantly, but had recourse to according to circumstances. That such treatment of the disease is perfectly applicable to very young children, as well as to those more advanced in years, I have had many opportunities of ascertaining practically, having had, among other young children, one only two years of age which perfectly recovered.

Exercise in the open air is an invaluable means of promoting health in many diseases, but in some instances (and caries of the vertebræ is one of them), it is impossible to have recourse to it, or to active exercise of any kind, without producing an amount of mischief much greater than the good effected by it. In cases of this kind, so long as the patient is allowed to go about, and while the caries is progressing, the constitution almost invariably suffers, while, under these circumstances, the recumbent position has a decidedly beneficial effect on the general health; scarcely a single instance having come under my notice where it was not improved while the recumbent position was employed, nor where the patient, independently of the amelioration in the deformity, has not become both stouter and stronger. Another advantage resulting from the adoption of this plan, is also very important, viz. that all pressure on the pelvis—a matter of great consequence to females—is avoided, and there is also perfect freedom from any pain, as regards the means employed, from the commencement to the end of the treatment. During the use of the recumbent position, the best opportunity is also afforded for regulating the diet, and placing the patients under such a course of medical treatment as is best adapted for each particular case.

Langham Place, London:
June 24, 1846.

ON

DISEASES OF THE LABIA.

By J. C. Evans, Esq.
Turnham Green.

Case of Prurigo Pudendi, occurring in a middle-aged female just after the cessation of the catamenia.

Mrs. S., aged 46, a stout healthy-looking little woman, with dark hair and eyes, of plethoric habit: is the mother of six children; the youngest sixteen years of age. Has always enjoyed very good health until she ceased to menstruate, about eighteen months ago. She then began to be subject to occasional attacks of pruritus of the pudenda when warm in bed, or heated from exertion or standing before a large fire. Until within the last three months it did not cause her a very great deal of inconvenience; but since then it has gradually got worse, and during the last three months she has scarcely had five minutes' ease from it. The pain becomes occasionally so severe that in spite of herself the tears will start to her eyes, and the perspiration run in streams down her face. Frequently, after getting into bed, so insupportable does it become that she is obliged to get out of bed to apply cold wet cloths to the part. Thinks that she must have caught it from an old woman who died while labouring under prurigo senilis, who lived in the house with her. A few papulæ of a bright red colour on the pudenda and inside of the labia can only be seen; for such has been the degree of irritation that the part is covered by scratches. The surrounding parts are dry and hot; pulse full and quick; skin dry, and complains of great thirst; bowels confined.

Treatment.—Took eight ounces of blood from the arm, from which she derived almost immediate relief. Four grains of Calomel and six of Compound Extract of Colocynth, to be taken directly, followed by a tablespoonful of the following mixture every four hours:—Nitrate of Potash, ʒj.; Sulphate of Magnesia, ℥j.; Camphor Mixture, ℥vj. Mix. The Lotio Plumbi to be kept constantly applied to the vulva. Passed a very comfortable night; bowels have been open several times; pulse less rapid; less thirst, and skin cool. To continue the mixture (omitting ʒvj. of the Sulphate of Magnesia) and the lotion.

Under this plan of treatment she soon recovered her usual health; but when her bowels become confined, or when there is any irregularity in diet, she always has a return of it. A lotion containing two grains of the Bichloride of Mercury and two minims of Hydrochloric Acid in an ounce of water, has been substituted for the lead lotion. The strength has been increased to five grains of the bichloride and five minims of the acid to the ounce. By attention to the state of her bowels and diet, she is, although not entirely rid of the disease, able to go about, and attend to her affairs.

Case of Phagedenic Ulceration of the Labia, arising from the application of Hydrarg. Nit. Oxid. and Savine Ointment, with exposure to wet, while under a course of mercury.

Maria B., 17 years of age, of dissolute habits, by trade a bonnet-maker: she is a pale, thin-looking girl, of strumous habit.

About six weeks ago had connection with a young man, a sailor, just returned from a West India voyage. After passing a week in his company, and leading rather a gay life, she returned to her work. About a week after felt the part rather painful; and she perceived a small sore on the inside of the labia. At the instigation of an acquaintance she went to a man on Tower Hill who professes to cure such disorders in an exceedingly short time. He gave her some small pills (to take one every night) and some ointment, to be kept constantly applied on a piece of rag. The pills appear to be Pil. Hydrarg., with about two grains in each. The ointment, I should think from its colour, was Hydrarg. Nitr. Oxid., with Savine Ointment. The sore got worse and worse, and gave her a great deal of inconvenience when walking to and from her work, which she was obliged to do night and morning: but he told her she must expect this until her mouth became sore.

I saw her on the 5th of April, about five weeks after she perceived the sore, and about a fortnight after she had first placed herself under the man's care. Her mouth had become slightly affected by the mercury. The sore, which was about the size of a shilling, was highly inflamed, and there was a great deal of constitutional irritation. Ordered her—

To take some saline aperient medicine, and to apply a bread poultice, made with Goulard water, to the part.

On the 15th I was requested to go and see her. I found her in a very deplorable condition. The sore had increased to five times its former size, involving about the whole of the labia of the right side, and some part of the other; deep, and covered by dark slough; edges ragged, and highly inflamed; pulse 100, small, and intermitting; skin hot and dry; face and mouth swollen; gums ulcerating, and the saliva extremely fœtid.

Linseed-meal poultices, with strong solution of Chloride of Lime, to be applied to the part, and renewed every six hours. To take a dose of Castor Oil when this has operated. To have 5 grains of Carbonate of Ammonia every 4 hours in 1½ ounce of the Decoction of Bark. Mouth to be gargled frequently with warm water, with a little of the solution of Chloride of Lime in it.

On the day after having been to me (April 5th), feeling a great deal better, she was invited by some friends to go to Greenwich. Went in an open boat; it rained during the whole of the time, and she got wet through. After sitting about the whole of the day, and partaking rather freely of beer and gin, she returned by the same conveyance late at night. Did not feel very well next day, but went to her work as usual; felt very ill in the evening, with shivering, succeeded by flushes of heat and pain in the chest and loins. The sore felt very painful, with shooting pains down the inside of the thighs, and up the groins. Her face and throat began to swell, with a constant discharge of saliva.

Felt very ill the next day, but I was in hopes that by staying at home and nursing herself she would get the better of it in a few days.

14th.—The ulceration extending, but otherwise the same as yesterday.

15th.—Ulceration extending; is very restless; pulse 120, small, and intermitting; bowels very much purged.

To take two tablespoonfuls of the following mixture every three hours:—
Aromatic Confection, ʒj.; Carbonate of Ammonia, ʒss.; Powdered Opium, gr. vj.; Decoction of Cinchona, ℥vj. Mix. To continue the poultices; and the gargle, with Chloride of Lime and warm water. To have a glass of wine every three hours.

16th.—The ulceration does not appear to have extended; pulse 100, small, but regular; diarrhœa better.

To continue the remedies.

18th.—The slough began to separate; her pulse, although at 100, was fuller and stronger, The diarrhœa had stopped.

The medicine to be taken three times a day, (omitting half a grain of the opium and the aromatic confection).

The mouth and face are better, and there is less discharge of saliva. The slough separated on the 22d, leaving a wound that would contain a good-sized orange.

The poultice was continued, but a solution of Sulphate of Zinc, three grains to the ounce, was substituted for the Chloride of Lime.

Granulations began to appear on the 28th.

As soon as she was fit to be removed I had her sent into the country: she never recovered her usual health, but ultimately died of phthisis about six months after she left London.

Case of Scrofulous Ulceration of the Vulva.

Louisa Reynolds, 3½ years of age; the youngest but one of seven children. The whole of the family occupy two rooms in a small house in Renel Street, near the Docks. The child was born near Gravesend, and while in the country always enjoyed very good health, but was not quite so robust as her brothers and sisters. Since she has been in London, about two years, has been constantly complaining. About eighteen months ago had the hooping-cough, and just after recovery had the measles. Her father met with an accident by the falling of some scaffolding, which prevented him from working for nearly four months. During that time it was with the greatest difficulty that they managed to obtain food.

The man began to work about eight

weeks ago; since then their food has been more wholesome, and in sufficient quantities. About a week back the child complained of pain when making water. The mother did not pay any attention to it, thinking that it arose from her previous bad living. Gave her a little magnesia and rhubarb, which appeared to do her good. When washing her, last Saturday night, the child cried a good deal when touched. The part looking red and swollen, she took her, the next morning, to a druggist. He seemed to think it was some bad disease, and recommended the mother to take her to a medical man. I saw her the next morning

The skin is dry and harsh, hair light, eyes blue and large, with dilated pupils, tongue red, and the papillæ towards the apex raised. The abdomen is large, and tender on pressure. The motions are of a light clayey colour. Appetite capricious, but generally very voracious. Just inside the labia is a small irregular ulcer, about the size of a sixpence, covered by yellowish-looking matter. The surrounding parts are slightly inflamed, of a shining livid appearance.

The mother is a stout healthy-looking woman, of the middle stature. The father is tall and thin. He suffers occasionally from difficulty of breathing. When she became pregnant with the child, he had just recovered from some affection of the chest, which I should suppose was bronchitis. Does not know that any of his or her relations died of consumption. The child born since she has been living in London is very healthy.

> Three grains of mercury with chalk, and six of Rhubarb, to be given every other night. Two grains of Iodide of Potassium in ℥ss. of the Decoction of Cinchona, three times a day. A lotion with ℈j. of the Oxide of Zinc, and minims x. of the Liquor Plumbi diacet. in 6 ounces of distilled water. Mix.

The diet to be light and nourishing, small quantities to be given at a time, but frequently; as much out of door exercise as possible without fatiguing her. I saw her again at the end of a week; the inflammation had entirely disappeared. Small granulations were shooting out from the side of the sore, which was beginning to pucker. The abdomen had not diminished in size, but there was not quite so much tenderness. The motions, the mother thought, were of a better colour, and her appetite was less voracious.

> To continue the mixture and lotion. The powder to be taken occasionally.

The mother having an opportunity of sending her down to her friends, I recommended her to avail herself of it. She called to say (six weeks after) that the child was doing very well, the sore had almost healed, and she was recovering strength very rapidly.

DIAGNOSIS OF CHLOROTIC ANÆMIA.

Every instance of anæmia is not always discoverable upon inspection of the tints of the skin, nor upon a survey of the state of the patient as to her *embonpoint*, since, in some anæmic individuals, the cheek and lips retain a considerable degree of freshness and vivacity of colour from a natural exuberant vascularity of the tissues composing them; and there are not a few anæmic patients who even grow fat during the malady. Now I should in such a case test the state of the lungs by asking the patient to make several forced inspirations, in order to discover whether the capacity of the lungs for atmospheric air were at all lessened by disease; and should she appear to be able to inhale fifty or sixty cubic inches at an inspiration, I should have a right to conclude that the air-cells of the lungs were free from pressure or obstruction, and duly expansible. This view might be confirmed by percussion and by auscultation of the chest. Still the respiratory difficulties remain to be accounted for, especially those proceeding from every muscular effort. I should next examine the frequency of the pulse, which, in a state of rest, might be sufficiently quiet—as at 70, or 80, or 90 beats per minute. If now the patient be requested to walk to the head of the stairs, and return immediately to her seat, she will, if anæmic, be found to have the pulse greatly accelerated and beating in the most troublous manner, to the number of 120, and even 160 pulsations per minute, while her respirations may amount to 40 and even 60 per minute. This fact serves to disclose the existence of an anæmic state, which, in order to effect any powerful innervation as exercise, &c., requires this great and extraordinary precipitation in the movements of the heart.—*Dr. Meigs' Notes to the Translation of Colombat on the Diseases of Females.*

MEDICAL GAZETTE.

FRIDAY, JULY 17, 1846.

A VERY elaborate Report has been drawn up on the subject of Explosions in Collieries, and recently presented to Lord Lincoln by Sir H. De la Beche and Dr. Lyon Playfair.

The document, which is of great length, may be regarded as a fair summary of what is already known on the subject. The explosions are due to the ignition of a gaseous mixture, consisting in great part (77·5 to 98·2 per cent.), of the light carburetted hydrogen gas.* As Professors Faraday and Lyell have long since pointed out, this gas from its levity floats on the heavy under-current of air, and collects in all the hollows in the roofs of the galleries. Thus the ordinary system of ventilation, by sending air along the floor, does not remove it. In a period of twenty-five years, 2,070 persons lost their lives from these explosions; and within the last ten years the rate of loss of life from this cause has certainly not diminished. In the past year, it would appear that more than one hundred persons have thus perished. The reporters do full justice to Sir Humphry Davy's invention of the safety-lamp. It appears, from the evidence brought before them, that many, if not all of these accidents, were owing to the lamp having been improperly used. The late Sir H. Davy himself was well aware that a blower (a strong current of gas) would cause the flame to traverse the wire-gauze and ignite the mixture. Mr. Buddle, a practical man, considered that the blowers would rarely be found strong enough for this purpose. If the lamp fell on its side, or if it were carelessly swung about by the workmen, an accident might, however, happen. The great source of the accidents is undoubtedly the neglect to use, or the improper use of, the lamp by the workmen. Thus the Report informs us that when paid for their work by the ton or piece they will remove the covers of their lamps or employ a candle at any risk. Managers have the greatest difficulty to prevent the continual use of candles in suspected places, before the danger becomes known to them. The less light afforded by lamps is considered to be a great drawback to their use when it can be avoided. The so-called "improvements" of the safety-lamp, while they add to the security of it, diminish the amount of light to such a degree as to render them practically useless. A lamp not open to this objection, is that modification where the wire-gauze cylinder is protected by a thick glass cover. The electric light of Grove and Bunsen is at present unfitted for use in collieries. The apparatus is heavy and complicated, and its use may give rise to other accidents.

The reporters consider that the question of obtaining useful lights should be made subordinate to that of a better system of ventilation in mines. The present system is decidedly defective, and so long as it continues, accidents must happen. They recommend that experienced officers should be appointed by Government, who should superintend districts, and see that the ventilation of collieries is properly carried out, as also that there is efficient knowledge on the part of subordinate agents employed by the managers. Carelessness on the part of colliers should render them subject to punishment. These officers should be made entirely independent of the coal-owners. The views of the reporters on the improvement of our collieries may be gathered from the following conclusions:—

---

* The other principal constituent is nitrogen, varying from 1·3 to 26·1 per cent.

"It being considered that safety lamps, properly used, do effect much security in the working of coal, and that in so many cases explosions do take place when they are not employed, it has often been suggested that the Legislature should compel the general use of safety-lamps in coal mines. But, on the other hand, there are many collieries in which fire-damp never appears, and it would justly be considered a hardship in such cases to compel a precaution altogether unnecessary.

"We would suggest that it could not be considered unjust for the Legislature *to compel the use of safety lamps in all fiery collieries*; and, in the present state of the law of property, it might even be prudent to assume that all collieries in districts where explosions have been frequent are fiery, putting the *onus probandi* that they are not, upon the owners of such collieries. If proved to the satisfaction of the inspectors that no reasonable danger was to be apprehended in their collieries, license might be given for them to work with naked candles, this license ceasing at short periods, but being renewable on ascertaining that the conditions of the mine had not altered.

"Careful investigations into the causes of explosions in collieries, only part of which arrest public attention by their magnitude, appear to have led to the very general conclusion that the condition of our collieries is most unequal. While in some localities there is so little to improve that it becomes a subject of regret that such examples should not be more generally followed; in others it becomes a matter of surprise how the works can be permitted to remain in so defective a state, seeing that the owners themselves suffer much loss thereby. Under such a state of things, and considering the number of valuable lives annually lost by colliery explosions, the continued risk to which so many are daily exposed, the national injury sustained by the imprudent and careless mode of extracting coal in many localities—one often felt oppressively also by the parties engaged in colliery speculations—and that the workings for coal must be adjusted to local conditions, we are led to consider that these evils might be at least mitigated by the careful and judicious inspection of convenient districts by competent persons, the necessary funds to be raised from such districts by a very slight impost, not even exceeding one farthing on each ton of coal raised in it; and we believe that the cause of humanity and the interests of the coalowners would be alike benefited by a well-considered legislative measure of this kind."

It is stated in the report, in reference to the effect of the after-damp (carbonic acid) that "this gas when present in no greater proportion than one or two per cent. is capable of producing the *most injurious* effects." We are at a loss to know on what authority this statement is made. Dalton has proved that in crowded assembly rooms the carbonic acid often amounts to one per cent. The effects produced by the respiration of such an atmosphere may be unpleasant; not merely, however, from the carbonic acid, but from the deficiency of oxygen, heat, and animal effluvia. We much doubt whether carbonic acid alone, in the proportion above stated, would produce any injurious effects, unless the individual preferred remaining so long in the locality as to put the effects of the mixture to a most severe and unnecessary test.

It is recommended that the miners, in order to avoid the danger from respiring carbonic acid, should breathe through bags containing a mixture of Glauber's salt and quicklime. The latter it is said would effectually absorb the carbonic acid. No case is mentioned in which the experiment has been successfully tried; and it appears to us, in the absence of such an experiment, that the suggestion is something like the "improvements" of the Davy lamp, "practically useless." Not only a man's mouth but his nostrils must be enveloped in the bag of lime and sulphate of soda. Dry lime finely powdered is not a good absorbent of carbonic acid, except when in very large quantity. If, however, the quantity were sufficient to arrest the carbonic acid, it might, by rendering it difficult for the air to traverse the powder, lead to the man's death from suffocation: and, on the other hand, if the quantity employed were small, and coarsely powdered, the carbonic acid would escape absorption, and the man would die from its effects. When it has been employed successfully in mixtures containing from ten to twenty per cent. of carbonic acid, we shall be ready to alter our opinion.

Reviews.

Notes and Recollections of a Professional Life. By the late **William Fergusson**, Esq., M.D., Inspector-General of Military Hospitals. Edited by his Son, **James Fergusson**. 8vo., pp. 248. London : Longman and Co. 1846.

A record of the experience of an able physician, indited at a period when the author's views had become matured and confirmed by the observation of more than fifty years, is a work which can scarcely fail to gain favour in the sight of a profession who have learned to value every scientific production wholly by the number and importance of the truths which it conveys. And this feeling of consideration is not likely to be diminished by a knowledge of the fact, that the active mind and the ready pen of the author now rest from their labours. The occasional errors of opinion which such a work may possibly display, can scarcely tempt even the most prying controversialist to expose the trifling flaws of arguments which their propounder can never stand forth to defend, and faults of arrangement and blemishes of style will be glanced at without any comment more strong than an expression of regret that the author passed from among us at a time when his literary toil was scarcely half complete.

Mr Fergusson, the editor, states in his preface, that :—

> "The present work was completed as far as page 124, in the autumn of the year 1843. In that condition it was manifestly imperfect, ending abruptly, with an article on Syphilis, without any peroration or resumé ; and he knows it was his father's intention to have added considerably to it, besides correcting many minor defects in its passage through the press. But even had this been completed, it then would have been only half the intended work, which was to have had a second volume, comprehending his opinions and experience of the civil branch of his profession, as this volume did of the military ; and as for more than a quarter of a century he had exercised his profession, as a physician, in Edinburgh and Windsor, the second would probably have been the more interesting and amusing volume of the two. In this latter it was, the editor believes, his intention to have abstracted, and, indeed, re-written the papers on Plague, Yellow Fever, Typhus, Cholera, &c., which are reprinted in the second part of the volume almost verbatim from the periodical publications in which they originally appeared."

The contents of this volume are all interesting, the whole is useful, as tending to improve the physical and moral condition of the British soldier, and many of the chapters are replete with the evidences of faithful observation and able powers of generalization.

The earlier pages of the work are certainly devoted, as the heading of the chapter would indicate, rather to "military tactics" than to military surgery; the whole introductory detail conveying to the reader's mind a vivid impression of the sensations of doubt which a medical neophyte may be supposed to experience during his first campaign, as to whether the soldier or the surgeon most prevails in his own character; but this fault (if that can be termed a fault which has so greatly assisted to give vigour and interest to the practical writings of Larrey and Guthrie) becomes less apparent as we read on, and arrive at the chapter on the "Exercise, Dress, and Arms of the Soldier." The author's remarks, in this and subsequent chapters, upon the necessity of varying the monotonous life to which the soldier is destined, while in barracks, by occupations which would tend to inure his body to the hardships of the field, and to relieve his mind from that sluggish y which almost invariably leads im to have recourse to the bane- citement of spirituous liquors, tremely just, and have, we be- of late years, been in many ces carried out.*

observations on the dress and of soldiers still hold good. From ne at which men ceased to con- the strength of their unarmed sufficient defence against the nal assaults of their foes, the arms which the disciplined soldier has compelled to invest himself, for tion in battle, have been among hief of the causes which have ed his life, in a vast majority of ces, a painful, a toilsome, and a turely brief career. Many im- ments have, of late years, been in military costume, but the sent which suggested the com- investure of the soldier's body avy plates of steel and folds of d leather, rendering him alike able to himself and horribly me to others, is scarcely less ionable than that which, besides ng the foot-soldier with more than pounds weight of accoutrements, him forth upon long and fa- ng marches tightly clothed in stuffs of the colours which are calculated to absorb heat, with chest and waist confined with y straps of the strongest buff, his fixed in an unyielding collar of rvious leather, and his head sur- nted by a useless mass of fur, h can answer no other purpose that of adding to his bodily ue. Surely these evils could be iated, and we sincerely trust that with whom the power lies will long perceive the necessity of ying the health as well as the arance of the soldier.

the commencement of his chapter 'Military Hospitals and Staff," we t with an amusing account of one he abuses which formerly existed he army: we quote it as a favour- specimen of the author's lighter :—

In the years 1793-94, a British force ent to Flanders. In those days we had little knowledge of hospital economy. The experience of the preceding war in America, important as it was, had in a great degree been forgotten; and the physician-general at home had pronounced his fiat against employing any other but graduates of the English Universities in treating the diseases of soldiers at the military hospitals. The consequences were such as might have been foreseen. An old broken-down court-physician of London, upon a claim of having accompanied the expedition to Cuba, some forty years antecedently, was appointed director-general. The old army medical officers were everywhere superseded by young medical men from the Universities, without the smallest advantage of clinical experience, or military medicine. Regimental hospitals were all but unknown, and in the general hospitals there was neither system, nor code, nor rule of management. As soon as circumstances pressed, every hospital accordingly became a pest-house—a deadly drain upon the effective strength of the army. The evils of accumulation, that mighty fount of human disease, became aggravated from month to month, until at the last I verily believe no army ever exhibited in its hospitals a more lamentable spectacle of indiscipline and abuse.

"The position of the young physicians, meanwhile, was both pitiable and ridiculous. Divested of the pride they had imbibed at the universities, they might have made excellent hospital-assistants: and, from their high general education, would have been deserving of every promotion the rules of military service—which in due course of time they would have come to grace and elevate—could permit. Their station in society, too, proclaimed them to be a class far superior to what the army had commonly received; but as physicians, setting aside their utter ignorance of diseases at so early an age, more especially military ones, they were far too fine for common use. To one of them I was attached in the first campaign. He could read Hippocrates in the original Greek, but he did not know the grain scales and weights when he saw them; and to have touched a bleeding wound, even while the sound of the cannon was booming in our ears, would have been to have lost caste. He was my superior by at least four degrees of military rank, but I had to teach him what I myself was taught in the early days of my apprenticeship. With an apothecary, an assistant, a nurse, and a clerk in his train, he might have made a routine book prescription, in classical Latin (for what young inexperienced physician ever makes any other except by chance) out of the military medicine chest; but had the ingredients of his own prescriptions been put into his hands, he would have known as

---

ndeed, in perusing this work it must be re- bered, that the author's medical experience btained many years ago, and that not a few e evils against which he protests are now mbered only as matters of historical sity.

> much about them as if they had been sent from Timbuctoo. He had worn a cap and gown at Cambridge, but it is not to be supposed that he had ever entered an apothecary's shop, or contaminated his hands with drugs either in bulk or detail." (pp. 57-58)

So absurd an error as this can never be expected to recur in the public service, but the above narrative is not without its moral to those young men of our own time who readily undertake the responsibilities of medical practice before they have duly accustomed themselves to the investigation of disease.

In the author's time the soldiers appointed as nurses were the very outcasts of the army. "In short," he says, "such a collection of incorrigible and incapable villains I believe never was brought together; and it was a true relief to the army when their drunkenness and the yellow fever killed them off." He argues that—

> "Formed as our army is, that such men will ever be prone to drunkenness is certain; and even were they not, it cannot be supposed that any class of males will make the best nurses for patients confined to bed in a sick ward. Wherever it is practicable, the women of the army should be employed in that office."

In his observations on the "Hospital Staff," some judicious remarks are thrown out with regard to the manner in which promotion is usually managed in the public services; the effect of advancement usually being to remove valuable men from the sphere in which they have hitherto most distinguished themselves, and to place them in situations where they are incapacitated from following out those pursuits in which they were calculated to do the utmost service." He observes—

> "Promote the operator amongst the regimental surgeons to the rank of physician, and the knife is forthwith taken out of his hands; he is never to touch it again. Make him a staff-surgeon, with superior rank, but the same pay, he may, indeed, preserve the amputation knife, but he is deprived of his home with the regiment, the accommodations of his mess and servant, and made to shift for himself as best he can. Still more, promote him to the highest rank of Deputy-Inspector or Inspector-General of Hospitals, and he ceases to be a medical man altogether, whether physician or surgeon. He is from henceforth to be a man of office entirely—an officer of administration alone: the book of physic, including surgery, is shut in his face, never to be opened unless by the less experienced juniors." (p. 65.)

In the section on "Diet and Rations," it is very truly argued, that although British soldiers are unquestionably better fed than are the troops of any other nation, "a great physiological principle seems to have been overlooked, and that is, the natural appetite for change and variety. It is ever the same, and no man, even if he will, can be satisfied with this. His stomach and digestive organs will be heard in their own cause; and if they be not attended to, their owner will fly to *alcohol*, in solace of the disappointment."

The author dwells, with great sense and force of argument, upon the injudicious manner in which alcohol is allowed to the soldier under all circumstances, and in every climate. The following narrative must suffice as an illustration of this insane practice:—

> "When the 67th regiment (of which I was surgeon), then newly arrived, and in garrison at Cape St. Nicholas Mole, St. Domingo, was ordered upon an expedition up the country. the troops, previously to marching off, were supplied with a full ration of spirits. It was, as might have been foreseen, speedily consumed, and the men marching under a burning sun, through a dry rocky country that furnished no water, fell down at almost every step. Nineteen actually died upon the road, and those who arrived at the end of the march—a distance of about twelve miles—were in a state of exhaustion and distress that cannot be described. No one, even amongst the officers, who ventured so much as to taste their undiluted spirits, escaped with impunity." (pp. 71, 72.)

The author does not irrationally oppose the use of alcohol, with due moderation, under certain circumstances, but he very properly exclaims against its administration to the soldier, either as a reward or as an incitement to exertion, in the torrid zone, as well as during the distresses of a winter campaign, and in making the "rum ration" an article of daily diet. We are not aware that any extended observations have been made on the subject, but we suspect that it would be discovered that an immense proportion of the deaths which formerly occurred among the wounded men operated upon in field practice, and an equally large amount of the mortality which prevails among the troops stationed in our large cities at home, as well as in most of the colonies, were traceable to this injudicious practice. The daily use of ardent spirits readily induces a state of the viscera which renders recovery from any serious wound almost impossible, and the "rum ration" is but a means of preparing the system for the pulmonary, hepatic, and intestinal diseases, and the pestilential fevers, which yearly bend the flower of our army to the scythe of the destroyer.

In the chapter on "Fever as an Army Disease," the author protests very strongly against the use of heroic measures in cases of fever; indeed, he appears to have very little confidence in any means which the physician can employ where the disease has once made its onset. We cannot altogether subscribe to his argument that "fever will run its course in every climate and in every constitution. *It cannot be prevented (!)*; and so completely is its dominion established when once begun, that even the worst practitioner, that is to say, the one who interferes the most with violent remedies, cannot always kill his patient." The argument that a disease may become so firmly established in the system as not to admit even of the patient's death in consequence of maltreatment is certainly new in physic. And we believe that the strongest advocates of the "expectant" plan in fever admit that in its premonitory stage it may frequently be checked by very simple measures.

> "Have we any safeguard" against fever? inquires the author. "None, but in the good keeping, good condition, physical and moral, of the troops. No remedy after the disease is established, none whatever in the way of physic; for the best physician that ever existed will lose more patients than the most ignorant hospital mate, if he neglects the precautions of discipline and cleanliness; and if both be on a par in this respect, the event will, in nine cases out of ten, be precisely the same. Hence, it appears that physic does nothing and has done nothing towards establishing a better mode of treatment since the days of Hippocrates."

The treatment which the author has "found most successful in various countries and climates (the necessary evacuations being premised) is cold water, or, in other words, the regulation of temperature; or, to humour the fashion of the day, saline draughts, which, being so many glasses of nothing, are the same as cold water; and on this *médecine expectante* stand prepared to meet whatever contingent symptoms may arise." There is a good deal of truth in the above remarks, but the propositions are certainly neither very closely nor very judiciously argued; indeed, the whole of this chapter betrays the absence of the author's revision. It will not surprise the reader that Dr. Fergusson should have conceived a disgust to the use of strong remedies in fever when he reads the following sentences:—

> "When I was last in the West Indies I was at pains to authenticate the records of a case of fever, where the patient had been made to swallow, previous to his decease, 960 grains of calomel, without ever shewing symptoms of salivation or constitutional affection in any way."

Again:—

> "When I was in the West Indies the surgeon of a fifty-gun ship refused to proceed on an ordinary cruise until I had first supplied him with four pounds of calomel; so great was his dread of the yellow fever and faith in the preservative." (p. 92-93).

The author placed no faith in the power of those chemical agents which are usually employed as disinfectants, considering that heat, light, ventilation, and the operation of water, are the only means by which noxious exhalations can be neutralised. With regard to the much-vaunted chlorine fumigation, he remarks:—

> "It was at least a work of supererogation, and it might be mischievous, because it could not be performed unless to the exclusion of ventilation; and when performed, I can vouch for its utter uselessness. There are few climates, few situations amongst congregated men, where I have not seen it employed; in the crowded hospital, in the foul transport, in the infected ship, in the ill-aired barrack; and I never saw it of the smallest service. Typhus fever, hospital gangrene, and all the poisons of accumulation, held their course untouched, until ventilation was allowed free scope, and separation of the sick effected."

The remarks on the advantage which the author has experienced from the use of fruits in cases of dysentery are particularly worth attention.

The author absolutely denies the contagiousness of purulent ophthalmia.

At the outset of his career the doctor was a strong advocate for the employment of mercury in every stage of syphilitic diseases, and the fact, which he learned from the Portuguese surgeons of the Auxiliary Army in the Peninsula, in the year 1810, that syphilis may be cured without a particle of mercury, appears to have filled him with astonishment. The following practical comment is the only remark which we can quote from this section:—

> "Were I now to make a scale of the applicability of mercury, I would say, that the tithe of what used formerly to be administered is the proper initiatory quantity in any case, until it can be ascertained whether it will suit the patient's constitution or not: that, again, a tithe of that tithe, or a centime, is about the allowable preliminary dose in secondary symptoms."

We must pass very briefly over the remaining chapters on Plague and Quarantine, Yellow Fever, the Marsh Fever, and Cholera Morbus. The author sided neither with the contagionists nor the non-contagionists considering that yellow fever, typhus, and cholera, were not essentially contagious, but merely began to exercise a noxious influence upon those who were yet free from the disease when the common precautions of cleanliness and ventilation are not carried out in places where the patients are congregated. Indeed, he altogether doubted the possibility of infection occurring within the tropics, believing that the high temperature there prevailing has the power of destroying the infectious properties of animal exhalations.

In maintaining this ingenious argument he, however, appears to have overlooked the fact that, even in the hottest climates, the temperature is liable to fall far below the point at which heat can be supposed to exercise a disinfecting power. We shall, however, conclude our notice of this interesting and clever work with the author's axiom upon this point, as the question is one which deserves investigation:—

> "Contagious fever, with the exception of the exanthemata, cannot exist in the torrid zone, nor any where else, in a temperature amounting to 80° Fahrenheit long continued."

Proceedings of Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, June 23.

Case in which a large Tumor was developed in the Substance of the Fifth Nerve, and its Ganglion. By James Dixon, Esq. Surgeon to the Royal London Ophthalmic Hospital.

A woman came under my care in October, 1844, for dimness of sight in the left eye. The fifth nerve on the same side had totally lost both its sensitive and motory function for a period of six months. Towards the middle of December, inflammation of the eye came on; lymph was effused into the anterior chamber, and the pupil became closed. At a later period, the external rectus and levator palpebræ, as well as the muscles supplied by the facial nerve, were paralysed, and on the 8th of February, 1846, the patient died.

The various symptoms observed during life,* were satisfactorily explained by the post-mortem examination. The temporal muscle on the right side was of natural appearance, whilst the left one was so wasted as hardly to be recognised. Everything was healthy in the brain and nerves on the right side. To the left of the pons varolii was an oval mass, slightly attached to the encephalon at the junction of the pons and crus cerebelli, and extending forwards, beneath the dura mater, as far as the foramen lacerum orbitale. This tumor, from which the three divisions of the fifth nerve emerged, had hollowed out for itself an irregular pit in the concavity of the great wing of the sphenoid bone. The glosso-pharyngeal, vagus, spinal accessory, and lingual nerves were unaltered.

The morbid growth proved to be a degeneration of the trunk of the fifth nerve and Gasserian ganglion. A section showed a reddish, soft, but not pulpy, mass, with here and there parts of firmer consistence, and of a yellowish colour. Not a trace of nerve-tubes or ganglionic corpuscles could be found in it.

Nothing abnormal was noticed in the ophthalmic ganglion or the ciliary nerves. The eye-ball was as large as the right one; the sclerotic was of natural thickness; the choroid of reddish-brown, with no trace of black pigment, except a little about the ciliary processes. The vitreous humour was perfectly clear and colourless; the iris adhered to the middle of the lens, which was of a pale yellow, and opaque at the centre. The cornea showed traces of its former opacity.

---

* Transactions of Medical Chirurgical Society, vol. xxviii. p. 389.

The author adverts to another case of an inflammation of the eye similar to the foregoing, with entire loss of function of the fifth nerve, on the right side, dependent on the development of a hard nodule of yellowish matter, about the size of a large pea, in the substance of the fifth nerve, close to its origin from the pons. On the left side a similar nodule was developed in the third nerve, and this had totally destroyed the function of the optic nerve, by compressing it just behind the commissure. No difference could be observed between the deeper textures of the two eyes. The lower third of the right cornea presented a dense white cicatrix, to which the edge of the contracted pupil adhered.

Particulars of a Case in which enormous Enlargement of the Spleen and Liver, together with Dilatation of all the Blood-vessels of the Body, were found coincident with a peculiarly altered condition of the Blood. By Henry W. Fuller, M.B. and L.M. Cantab.

The author relates the particulars of one of those cases of enlarged and indurated spleen so frequently met with in malarious districts, and more rarely in parts of the country apparently exempt from malarious influence. The case was that of a man, an inhabitant of Chelsea, who was admitted into St. George's Hospital on Dec. 31st, under the care of Dr. Nairne. The disease, which, according to the patient's account, commenced about eight months prior to his admission into the hospital, was for some time characterised only by languor and depression, with many symptoms indicative of dyspepsia. In the course of about six weeks, however, his attention was drawn to a small, hard, yet by no means painful tumor, in the left hypochondriac region, which after remaining nearly stationary in size about three months, began to increase very rapidly, while the symptoms of dyspepsia were greatly aggravated, the languor and depression became extreme, he lost his appetite, his bowels became habitually costive, and he suffered from headache and vertigo, nausea, and occasional vomiting. No medical treatment was had recourse to, and the tumor continued to increase in size; epistaxis ensued, and constantly recurred, and about the middle of December, diarrhœa supervened; in addition to the other symptoms, he became slightly jaundiced, and after lingering on for some little time, getting daily weaker and weaker, expired on the 8th of January, 1846.

Post-mortem examination revealed, as was expected, an enormously enlarged and indurated spleen, and very great enlargement of the liver. But further investigation proved that all the blood-vessels of the body were much dilated, and the blood itself was grumous and of a peculiarly grey colour. During life, the author had three times examined the blood under the microscope, and after death he proceeded again to its examination, and in every instance with the same result. On each occasion he found, in addition to the natural blood corpuscles, a very large proportion of abnormal, granular, colourless globules, which he proceeds more particularly to describe, and then, having detailed the particulars of the case, with this remarkable alteration in the blood, he proceeds to inquire into the nature of the disease, its connexion with malarious influence, the cause and nature of the local enlargements, the mode of generation of these abnormal globules, and the possibility, in such a case, of effecting a cure; and after adducing reasons for his several conclusions, propounds it as his opinion, that the disease essentially consists in some peculiar perversion of the nutritive functions, induced by exposure to malaria, or some such analogous influence, and that "instead of viewing the enlargement of the spleen as the principal object for investigation, it will be consistent with a correct view of the disease to speak of the enlargement of the spleen as one of the phenomena usually attendant on a peculiar form of constitutional disorder." He does not refer the local enlargement to inflammatory action, or to obstruction to the circulation, caused by the presence of these granular globules, but looks upon them, together with the dilatation of the blood-vessels, the altered condition of the blood itself, and the organic lesions, as simple evidences of perverted nutrition, in themselves the effects of one and the same cause.

He illustrates the case, and supports some of these positions, by reference to another, and, as he believes, a similar case, which fell under his observation in St. George's Hospital, in the early part of the year 1842. The history and particulars of the case he briefly details, and then concludes, in reference to the possibility of effecting a cure in this form or modification of disease, that if careful and approximate treatment be in the first instance adopted, a favourable issue may not unreasonably be expected; but that if the first stage be neglected, and the formative functions are so far perverted as to have given rise to the generation of these abnormal globules in the blood, before the patient is properly attended to, the case must be, from its nature, hopeless.

Case of an Abcess in the Neck communicating with the Aorta by an Ulcerated Opening. By George Busk, F.R.C.S.E. and Surgeon to the Seaman's Hospital.

The subject of the case was a woman, aged thirty-five, who died on June 3rd,

1846. An abscess had formed in the neck anteriorly, which burst spontaneously about five months before her death, and had continued to discharge white purulent matter through a small funnel shaped fistulous opening in the hollow immediately above the upper edge of the sternum, and in the mesial line. On the morning of the 1st of June, hæmorrhage of arterial blood took place, and recurred in the evening on the compress being removed. The blood welled up with indistinct intermissions, and was readily stayed by pressure. The hæmorrhage recurred more violently on the following afternoon, and on being stayed by compress, the cavity of the abscess became filled with blood, and then communicated the feeling of diffuse pulsation like that of an aneurism. The woman sunk and died about forty-eight hours from the first appearance of the hæmorrhage. Post-mortem examination displayed a large old abscess occupying the front of the neck below the larynx, and extending behind the sternum to the right side of the arch of the aorta, and a lateral extension of it passed between the right bronchus and arteria innominata, to the spine, but the bone was not diseased. The external cellular coat of the aorta, where that vessel entered into the formation of the wall of the abscess, and also of the arteria innominata, was entirely removed, and the middle fibrous tunic exposed, so that its structure was quite evident for a considerable space. In the centre of this portion of the aorta was a small lacerated opening, about a quarter of an inch in length. This opening penetrated the middle and internal tunics of the vessel, and the edges of the rent were sharp, and a little ragged, and immediately around the opening the internal surface of the aorta was slightly roughened by the deposition of lymph. A similar roughening was present on the inner surface of the arteria innominata, opposite the portion deprived of its external coat, and much thinned.

The author remarks, that the points of interest in this case appeared to be the length of time (forty-eight hours) after the commencement of the bleeding from the aorta before death was caused; the fact of the perforation of a large arterial trunk by ulcerative action proceeding from without; and the circumstance of the abscess assuming the pulsating character of an aneurismal tumor when distended with fluid blood, a character which was previously entirely wanting.

A Case of Cystic Disease, or Cystic Sarcoma of the Testis. By John Adams, Esq., Assistant-Surgeon to the London Hospital.

The author states, that a recent examination of a specimen of this disease having led him to a conclusion as to its nature at variance with the commonly received opinions upon the subject, he is induced to lay before the Society a brief account of the case, and of the result of his examination.

George C——, aged twenty-three, was admitted into the London Hospital for an enlargement of the right testis, consequent upon a blow sixteen months previously. He had been under treatment by different surgeons, and the tumor had been twice tapped. On the first occasion, a teaspoonful of clear fluid was discharged, and on the second occasion between two and three ounces of a dark-red fluid were drawn off. The swelling was increasing, and becoming more painful. It was removed in the usual manner. On making a section of the gland, the tunica vaginalis and tunica albuginea were found thickened, and partially adherent. Beneath the latter tunic, the tubuli seminiferi formed an expanded layer over the diseased mass. This layer, which varied in thickness, could be readily peeled off the surface of the tumor to the back part, where it was too firmly adherent. The tumor appeared to spring from the corpus Highmorianum within the tunica albuginea, and was principally composed of cysts, containing a straw-coloured serum. It also contained a substance of a yellowish colour, presenting a reticular appearance, and a quantity of lymph unorganized.

It appears to the author, from an examination of this specimen, that the opinion of Sir Astley Cooper, which assigns the tubuli testis as the seat of the cystic disease, cannot be maintained, this part being natural in appearance, although spread out over the surface of the tumor. On inspecting other specimens of the same disease, he has remarked a firm layer surrounding the cystic tumor, which he regards as the tubular layer condensed by the pressure of the tumor, and by inflammation.

On a Luminous Appearance of the Human Eye, and its Application to the Detection of Disease of the Retina. By William Cumming, Esq., late Surgeon to the London Hospital.

The author mentions the well-known luminous appearance of the eyes of cats, dogs, and other animals, the reflection from the eyes of albinoes, &c.; and after quoting from the works of Müller, Bier, and Tyrrell, as to other cases in which reflections have been observed from the posterior part of the human eye, proceeds to say, that the object of the present paper is to show that the healthy human eye is equally, or nearly equally, as luminous as the eye of the cat, &c., when observed under favourable circumstances; and the application of the alteration or loss of this luminous appearance to the detection of changes in the retina, and posterior part of the eye.

The author states, that the reflection may be seen in the following manner: Let the person whose eye is to be examined be placed at the distance of ten or twelve feet from a gas or other bright light; the rays of light must fall directly on his face, all rays falling laterally of the head must be intercepted by screens placed half way between the light and the eye examined. If the reflection be bright it will be at once seen from any spot between the light and the screen.

The author having more particularly described the mode in which the observations brought forwards in this paper were made, remarks—The luminous appearance varies from a dingy red to a bright silver or golden tint, in some cases of extreme lustre, equalling that of a well-ignited coal. It is more brilliant when seen at several feet distant. It was always seen when the eye was healthy and the pupil easily dilated. The reflection was seen in cases in which the lens had been removed by the operation of solution. Twenty cases were examined indiscriminately, vision being perfect in all, the age varying from a few months to sixty years. In sixteen cases the reflection was bright and very evident, in four faint, and seen with more difficulty, and in one it was not seen.

As to the cause of this reflection, it is attempted to be shown, that the retina, although a perfectly transparent medium in the living eye, is still a reflecting body. The formation of images upon the retina, the reflection from the cornea and lens, and other transparent bodies, are cited as proofs of this. Other circumstances would increase the brilliancy of retinal reflection—viz., the concave shape of the retina itself, the position of the lens, the influence of the vascular anterior layer of the retina filled with red globules of blood.

The author remarks, that the establishment of the fact of a similar reflection from the healthy human eye to that from the eyes of other animals, appears important in two ways. First, as a physiological fact, it shows that too much influence has been ascribed to the tapetum, that of the retina being entirely overlooked. Secondly, in a pathological view, the existence of this appearance in the healthy eye having been recognised, its non-existence, or alteration, may enable us to detect changes in the condition of the retina and posterior part of the eye heretofore unknown, or satisfactorily to see those which we only suspected.

Case of Strangulation of the Ileum in an Aperture in the Mesentery.

By JOHN SNOW, M.D.

The subject of this case was a lady, aged twenty-four. When in the eighth month of pregnancy, she was seized with severe pain in the belly, of an intermitting character, with sickness and vomiting. She thought labour was coming on; but there was no dilatation of the os uteri. The symptoms throughout her illness were those usually arising from some mechanical obstruction in the bowels, and in spite of all the remedies employed, they continued, with more or less severity, until her death, which took place on the fourth day.

An examination of the body was made twenty-four hours after death, and the morbid appearances are fully detailed. On examining the preparation which was on the table, the vermiform appendix is found enclosed within a double layer of peritonæum, which forms a kind of broad ligament, which is attached above to the cæcum and ileum, and externally and inferiorly to the iliac fossa and brim of the pelvis. On the outer side of the vermiform appendix there is an aperture in this membrane with defined edges, through which the thumb can be passed; and behind the portion of it, which extends with a curve from the appendix to the ileum, there is a pouch, into which a finger can be passed for about two inches. The thin membrane passing across from the vermiform appendix to the ileum, and leaving the aperture through which the aperture took place, forms an extension of the above-named curve.

The author remarks that there are many cases on record of strangulation of the bowels from adhesion of the vermiform appendix with neighbouring parts; but the appearance of the membrane in this case, the absence of the evidence of old inflammation, and the circumstance that the membranous band appears to be a natural continuation of a larger fold, leads him to consider it as a congenital production of peritonæum, leaving an aperture on the inner side of the appendix vermiformis similar to the one seen on its outer side.

A Case in which there was Congenital Deficiency of the left Kidney, and in which death was caused by Granular Degeneration of the Existing Kidney.

By GEORGE BUSK, Esq., F.R.C.S.E., and Surgeon to the Seaman's Hospital.

THE subject of the case was a gentleman who died on the 6th of May, 1846, in his twenty-seventh year. He had enjoyed good health until within three years of his decease, when he became ailing, and looked ill and bloated, but was well enough to continue his pursuits, and to take tolerably active exercise, up to last Christmas. In March he was affected with dropsy and albuminuria, with frequent epistaxis, and general disturbance of all the functions. The under side of the tongue, and the inside of the cheeks and lips became gangrenous before death, the body exhaling a strong fœtid urinous odour. The secretion of urine, however, continued, to the amount of a pint and a half in the twenty-four hours, up to the day of his death. The left kidney and superior renal capsule were entirely wanting; the ureter on that side was very small, and was inserted in the usual place into the bladder, and terminated about six inches from that viscus in a cæcal extremity. The right kidney was corrugated, and very small; the capsule closely adherent; the form otherwise normal; the substance condensed, firm, waxy, and marked on a section with white puncta and striæ. Microscopic examination showed no oil, but partial obliteration of the tubular and vascular structure, and in other parts a deposit in the tubuli uriniferi of an opaque minutely granular matter, soluble in acetic acid, and presumed to be of an albuminous nature.

The author remarked that the case presented an instance of complete deficiency of one kidney, without corresponding increase in size, or alteration of shape, of the existing one, which was apparently even below the natural size; and he observes that the diseased condition there present, and the consequent albuminuria, was not owing to the oily matter in the tubuli uriniferi, or substance of the gland, but to the pathological change analogous to that which produces cirrhosis in the liver, or, as it may be supposed, to an adhesive inflammation of the tubuli uriniferi, and probably to the venous capillaries of the gland—a condition, in his opinion, more common as the cause of chronic albuminuria, and the other symptoms produced by what is termed granular kidney, than that in which a superabundant quantity of oil is found in the tubuli uriniferi. And he stated his belief, that in all cases where there was an undue deposit of oil in the kidney, the liver would be found diseased; and that the secretion of oil by the kidney, as in other cases that of bile, takes place by the vicarious action of that gland supplying the defective power of the liver.

This was the last meeting for the season.

Hospital and Infirmary Reports.

UNIVERSITY COLLEGE HOSPITAL.

A Case of Sciatica, treated with Moxas. Clinical Remarks, by Dr. A. T. Thomson. [Communicated by Septimus Lowe, Esq. M.R.C.S.]

Lucy B., aged 48, was admitted into University College Hospital, under Dr. Thomson, April 23d, 1846. She is of slight conformation, sanguine temperament, and dark complexion; a single woman, very regular in her habits, and who has always had sufficient wholesome food. She has generally taken a small quantity of porter daily. She is a servant; she has always been well clothed, and has slept well.

She has resided in London for the last 44 years, and has lately been living in a damp but open situation. Her parents are dead. She is not aware of any hereditary predisposition to disease existing in the family. Her health has generally been very good. About three years ago a tumor was removed from her left breast; and since that time she has occasionally suffered from severe pain in the part. About eighteen years ago she had acute rheumatism, which lasted a considerable time. During the last six months she has complained of occasional rheumatic pains in different parts of the body.

The present attack commenced about a month since. She states that she was seized with pain in the back, the right shoulder, and the left hip and groin; but there was no pain in the head, nor heat of surface, nor feverishness. A week ago she got wet through, and sat in her wet clothes for some time; and soon afterwards the pain became more severe and in decided paroxysms; lasting a few hours, and then leaving her almost free from pain.

At present she complains of great pain in the right shoulder, and in the left groin and hip, which is much more severe occasionally, especially at night, so that she can scarcely obtain any sleep. There is tenderness on pressure along the whole course of the sciatic nerve. Her general health appears to be but little affected. There is no spinal tenderness. The organs of respiration, and also those of circulation, are healthy. The appetite is good; the tongue is pale and clean; the bowels are regular; the pulse is soft, slow, and compressible. The catamenia ceased twelve months ago; previous to that time she was quite regular. The urine is pale, and acid in reaction. She was ordered middle diet, and to take the following draught three times a day:—

℞ Tincturæ Guaiaci, ℥ss.; Tincturæ Aconiti, ♏iv.; Pulveris Acaciæ, ℈j.; Aquæ, ℥x. ft. haustus.

April 26th.—The pain is not quite so severe.

The medicine to be continued.

29th.—No improvement.

May 2d.—The urine deposits lithates. The pain is still as severe as ever: the bowels are open.

The medicine to be continued, adding half a drachm of tincture of guaiacum to each dose.

5th.—The pulse is soft, compressible, and

72. The pain is more severe; it comes on more suddenly, and is more regularly periodic, being worse at night than in the morning.

> The medicine to be omitted. Let her have full diet. ℞ Quinæ Disulphatis, gr. j.; Decocti Cinchonæ Flavæ, ʒxij.; Acidi Sulphurici Diluti, ♏x. ft. haustus ter quotidie sumendus.

9th.—The pain is not so severe; she only had it for two hours this morning.

> The medicine to be continued.

11th.—She again complains of agonising pain in the course of the sciatic nerve.

> To have a long aconite plaster applied over the seat of pain.

12th.—Improved in every respect.

14th.—The pain has again returned as severely as ever, but it is not worse at night. She was ordered—

> To be cupped to the amount of twelve ounces over the seat of pain, and to take two grains of calomel with one grain of opium after the operation of cupping.
>
> ℞ Vini Seminum Colchici, ♏xxiv.; Tincturæ Aconiti, ♏xij.; Misturæ Camphoræ, ʒxij. M ft. haustus quartâ quâque horâ sumendus.

16th.—Much improved after the cupping; she has had no pain in the shoulders for several days.

19th.—The pain has again returned in the course of the sciatic nerve.

> Let six moxas be applied to the part, and continue the medicine.

21st.—Much improved; has had no pain, but merely a sensation of soreness and numbness in the part since the application of the moxas. From this time the reports were all favourable, and she has not had any return of pain up to the present time. On the 26th she was ordered more generous diet, and to continue the medicine. On the 28th she was nearly convalescent, and was ordered a mild tonic. On the 30th the sloughs separated, with but little discharge from the sores. June 6th.—Still free from pain; ulcers healing. 9th.—Going on well. Will be able to leave the hospital as soon as the ulcers are healed.

Dr. Thomson observed, that the nature of sciatica was not yet fully agreed upon, although it had been long agitated by different authors. Is it rheumatism? Dr. Barlow (a very good authority) and other writers regard it as having a greater affinity to neuralgia than to rheumatism. If we argued from the case before us, and others of a similar kind, the pains in the shoulder, the back, &c. would induce us to class it with rheumatism. In general, the pain was preceded by constitutional fever; and in sciatica this was very often the case, although the previous fever was frequently overlooked. Rheumatism most commonly attacks muscular and membranous parts, and in sciatica the inflammation is most probably seated in the theca of the nerve, not in the nerve itself. Again, the patient had suffered several times from rheumatism, and there evidently existed a predisposition to the disease. In sciatica the local inflammation is less likely to move, or, as the term is, undergo metastasis; and the febrile symptoms are necessarily less obvious than in general acute rheumatism.

A question here presented itself: If we maintain the rheumatic character of sciatica, what are the causes of rheumatic inflammation? In reply, we should say, cold and damp, currents of air when the body is warm, &c. But if two persons were exposed to the same exciting causes, and one only got rheumatism whilst the other got pleurisy, there must have been some predisposing state which leads to the setting up of rheumatic inflammation. This is stated to be plethora; but when that is the case, pneumonia, or pleurisy, or other inflammations, are more likely to occur than rheumatism, and still more than sciatica. Dr. Thomson was therefore of opinion that when rheumatism makes its attack there is not merely plethora, but a high susceptibility of the nervous system. Hence the inflammation, whatever tissue it affects, is accompanied by acute pain.

Leaving theory, let us look to the influence and propriety of the treatment in this case, in reference to the disease in other instances. As the pulse and general symptoms did not indicate febrile excitement, general bleeding and antiphlogistic measures were not deemed necessary: on the contrary, the indications to be fulfilled were—1st, to render the system less sensitive by giving tone; 2nd, to subdue topical inflammation. The first indication was here the more necessary, from the neuralgic character of the pains, and their periodicity: hence guaiacum was ordered as a warm purgative, and also to act on the skin, and afterwards the disulphate of quinine. The aconite plaister appeared to relieve the pain for a short time, but since it soon returned again with increased tenderness, and the small pulse was no indication that active local inflammation was not present, she was cupped, and as re-action had taken place the tonic was discontinued, and colchicum substituted: as, however, the pain still continued, the object was to subdue the local inflammation either by topical bleeding, sedatives, counter-irritants, or the more powerful influence of moxas. Topical bleedings, with the administration of colchicum or aconite; blisters dressed with morphia, especially if an eruption appeared, acupuncture needles, counter-irritation, &c., would often relieve temporarily; but if the disease had been of long standing the benefit was seldom permanent. The pain from the application of the moxas was not nearly so severe as was generally supposed; a small number would cause almost as much pain as six or eight, and was not at all to be depended upon. The Chinese, who chiefly employed this remedy, generally applied six or eight on either side of the spine, in cases of severe lumbago. Moxas acted by giving an intense local stimulus to the capillaries of the part; but this was not confined to the surface; it extended to the deeper structures, and by equalizing the circulation in the theca, removed the pressure from the nerve. It was, therefore, erroneous to suppose that the benefit was derived from the discharge set up, for this was very small, and indeed the improvement was generally most marked long before the sloughs had separated. Dr. Thomson considered that this remedy was too much neglected by British practitioners; he had used it in numerous instances, and generally found the cure effected permanently.

The best moxas are prepared by dipping a piece of bibulous paper in a solution of diacetate of lead, drying it, and rolling it up in the form of a cylinder. It burns well and steadily, leaving an ash of yellow oxide of lead.

Note.—The decoction which Dr. Thomson has found to be so beneficial in the treatment of obstinate cases of ichthyosis, is made by boiling an ounce of the sliced root of the common dock, rumex obtusifolius, in a pint of water. Dose about two ounces.

Correspondence.

THE USE OF EMETICS IN CASES OF EXHAUSTION.

Sir,—I cannot but express my entire concurrence in the justice of your remarks, in your last number, on Mr. Higginbottom's communication, respecting the exhibition of emetic doses of ipecacuanha in cases of extreme exhaustion, when there is a tendency to the sinking of the powers of life. In cases of uterine hæmorrhage, for example, in which this practice has been recommended, are there no remedies of acknowledged and trustworthy power, without having recourse to the use of emetics? Will not opium, as a cordial, very generally serve our purpose? I have tried it in a great multitude of cases, and can with perfect confidence recommend it as, on the whole, the safest and best remedy which can be employed. Not but I think highly of the well timed administration of ipecacuan emetics in a variety of cases attended with great languor and depression, more especially when the air passages or *primæ viæ* are at the same time much disordered. If the patient be aged or much debilitated, it may be well to combine a stimulant (such as sal volatile) with the emetic, or to apply a sinapism to the pit of the stomach immediately after the action of vomiting is over. The remark of the reviewer in the Medico-Chirurgical Review, for April 1844, which you quote, is entirely in accordance with what I have found in practice.

Before concluding I cannot but express my surprise at part of the treatment adopted in the last case that is recorded by Mr. Higginbottom—that where excessive prostration and vomiting occurred in a puerperal patient. The addition of half an ounce of oil of turpentine to each beef-tea enema, and this given every four hours, seems any thing but judicious. No mention is made of opium or brandy having been tried.

A Constant Reader.

OIL OF TURPENTINE AS A STYPTIC.

Sir,—Allow me to corroborate your recommendation, at p. 84 of this day's Gazette, of oil of turpentine in cases of hæmorrhage. During my residence in the Glasgow Fever Hospital, obstinate hæmorrhage from leech-bites often occurred. In some cases it was so profuse as to threaten life. I have repeatedly tried strong solutions of alum, acetic acid, and tincture of sesquichloride of iron without effect, but I do not recollect one case in which the application of a pledget of lint dipped in oil of turpentine failed to arrest the bleeding.

I am, sir,
Your obedient servant,
A. P. Stewart.

130, Mount Street, Berkeley Square,
July 10, 1846.

DEPUTY-VACCINATORS.

Sir,—Probably I may be hardly credited when I give the following statement concerning the manner in which one of the public vaccinators performs the duties entrusted to him; or rather, I should say, causes it to be done. A medical man in this neighbourhood, an officer of the Union, for which he receives some 30 or 40 pounds a year, exclusive of vaccination fees, during last summer employed a framework knitter to go round and vaccinate the children of the poor for him, for which service this knitter received the sum of 3d. for each case from the public vaccinator, who no doubt received the usual fees from the board of

Guardians, for each successful case, which, I believe, is 1s. or 1s. 3d.

The mind of any honourable man would recoil from the idea of such conduct as this, and certainly such treatment of vaccination by a professional man, in the eyes of the poor is not at all calculated to give them exalted ideas of its real worth, or even to engender a desire among them to have their children vaccinated, which under the most favoured circumstances they are too apt to neglect. Suppose this knitter to have vaccinated some scores of children, which undoubtedly he has done; where is the medical man that would certify, upon his testimony alone, that they were properly vaccinated? Still their names are duly registered: and suppose further that small-pox were to make its appearance in the parish some eight or ten years hence, and many of these children would probably die of the disease, and be entered as "fatal after vaccination." This, sir, is too bad, when our legislative authorities do all they can to procure true returns, that even men in our own ranks, of all others, should be found to treat so lightly all attempts to secure well authorised statistics, and virtually supply us with wrong data for inferences relative to the value of vaccination. Such conduct ought to meet with its deserved censure from the proper authorities. It is a great deal worse than quackery.—I remain,

Your obedient servant,

A General Practitioner.

July 7th, 1846.

⁂ The name of the writer, with the names of the vaccinator and his respectable deputy, have been forwarded to us in confidence. Well may revaccination be considered necessary if the provisions of the Vaccination Act are to be thus carried into operation!

A CONTRAST OF THE HEPATIC AND PULMONARY CIRCULATION.

(By a Correspondent.)

HEART—ARTERY.	SPLEEN—VEIN.
1. The soluble and nutritious portion of the food passes from the digestive tube into the *lacteals*, and through the *mesenteric glands* and *thoracic duct* into the *left subclavian vein.*	1. The soluble and nutritious portion of the food, as well as the drink, passes from the digestive tube into the *intestinal capillaries*, and through the *mesenteric veins* into the middle of the trunk of that *great vein whose roots are in the spleen, and whose branches are in the liver.*
2. It is a large *artery* which takes the blood to the lungs.	2. It is a large *vein*, which takes the blood to the liver.
3. To this artery a *heart*[*] is prefixed.	3. To this vein the *spleen* is prefixed.
4. Into the heart *large venous roots* go—the cavæ.	4. Into the spleen *small arterial branches* go—the branches of the splenic artery.
5. Out of the heart comes an *artery*—the pulmonary, or cardia-pulmonic.	5. Out of the spleen comes a *vein*—the splenic or spleno-hepatic.
6. The reverse or contrary of the *artery* is the *vein*.	6. The reverse or contrary of the *heart* is the *spleen*.

Diametrically different *anatomical causes* produce diametrically different *physiological effects*.

7. The blood-vessel going to the lungs, consisting of a *heart* and an *artery*, produces a *constant* and *rapid* motion of the blood through the capillaries of the lungs.	7. The blood-vessel going to the liver, consisting of the *spleen* and a *vein*, produces an *intermittent* and *slow* motion of the blood through the capillaries of the liver.

LETTER FROM DR. BOSTOCK.—OLD MEDICAL WORKS PASSED OFF FOR NEW.

Sir,—In looking over a publisher's catalogue of medical books, a few days ago, I was not a little surprised to observe announced, the 4th edition of my Physiology, said to be published in 1844, and to be "revised and corrected throughout." I procured this said 4th edition, and upon examining the volume and turning over the leaves, I found that it was really the 3d edition, published in 1836, and, as far as I could discover, with no other alteration than the new title, which was attached to the old work. I consider it but justice to myself, as well as to the public, to make known this deception. I shall ever feel grateful for the favourable reception which my work obtained from the public, which I have always regarded as quite equal to its merits. But its merits, be they more or less, mainly depended upon its conveying a correct account of the state of the science at the period of its publication, and every one must be aware, that in a science so rapidly progressive as physiology, the lapse of eight years produces a most important change in this respect.

---

[*] *i. e.* one auricle and one ventricle.

But I conceive that you will not consider it necessary for me to offer any further apology for thus obtruding myself on the notice of the public, through the pages of your journal. I have stated the correct matter of fact, and your readers will judge of the propriety or prudence of the step which I have now taken.—I am, sir,

Your most obedient servant,
J. Bostock.

Upper Bedford Place, July 13th, 1846.

⁂ Dr. Bostock's complaint is well founded. This appears to us to be a scandalous attempt to impose on the medical profession, and to induce them to purchase old editions of works in medicine, surgery, anatomy, &c. for new. Another instance has been pointed out to us. There is in the list which has been sent to us a work advertised as Taylor's Medical Jurisprudence, 1843. A correspondent informs us that he purchased a copy, and that it turned out to be the Elements of Medical Jurisprudence, published in 1836. The advertisement, however, would lead to the impression that it was the more recent work published by that author—namely, the Manual of Medical Jurisprudence. There is no objection to a publisher selling old books or cast off copies of old editions of medical works, but he has no right to pass them off by equivocal advertisements and false title-pages, as if they were new. It is an injury to medical authors, publishers, and readers, and we think it our duty to caution those who are inclined to indulge in these tempting bargains, that they look well to the contents "of these new, valuable, and most important books" before they add them to their libraries.

Medical Intelligence.

MEDICAL OFFICERS OF THE INDIAN ARMY.

NEGLECT OF THEIR SERVICES BY GOVERNMENT.

While honours, pecuniary rewards, and brevets, are being showered forth with a profusion and liberality hitherto unknown to the army, we would call attention to the services and the merits of a class of officers that, by some strange oversight, have not hitherto been even mentioned by our statesmen and orators.

We here refer to the medical officers of the public services; but, as having more immediate reference to our subject, to the medical officers serving in the East Indies. We must premise that the neglect about to be proved rests not with the Indian authorities, for a more liberal, considerate, or just government exists not than the Court of Directors, whose recent improvements of the pensions of their medical departments deserve our most unqualified praise. The exclusion of medical officers from military honours and rewards has been grounded by some persons on the technical circumstance that they have been rated as "civil staff," with commissaries and chaplains, and that surgeons are what are technically denominated non-combatants.

The technical distinctions here mentioned might be allowed to pass, were it not for the injustice that is founded upon them. It has never appeared in our *Gazettes* that either clergymen or commissaries have been killed or wounded in any of our campaigns, while the number of medical officers who have thus fallen is attested in all our histories. Again, as to non-combatants, all officers are generally non-combatants, and they never become otherwise unless personally attacked; a circumstance of rare occurrence. The great duty of commissioned officers is to look to and direct their men in their fighting. That, in conducting this duty of supervision and direction in battle, the officer incurs much personal risk, is well known; but so also does the medical officer, staff and regimental. Mr. Guthrie states, on his large experience of war, that "it is quite impossible for a regimental surgeon to be out of fire if he does his duty; and a medical staff officer can scarcely be out of the way of cannon-shot. Every one who has been a regimental officer knows well how often the surgeon is called to the front, even when a single man is wounded. The soldier expects his assistance, and medical men have never disappointed him either in the French or in the British armies." It is well known also, that no storming party ever ascended the breach without its surgeon in company, up to the very breach, and in every siege they are placed in the gorge of the trenches. In the performance of these and other duties numbers of medical officers are killed and wounded, and, without referring to European wars, it will be in the recollection of every one who has served in India, that in the campaigns of Lord Cornwallis, in the Mahratta war, in the Burmese and Affghan wars, and in the recent campaign on the Sutlej, numbers of surgeons have been killed and wounded.

We will not stop then to discuss technicalities about words, such as non-combatants. It is established in the history of every campaign, in every quarter of the world, that—to use the words of Dr.

Robert Jackson,—"the medical staff shares in the fatigues and dangers of war." Let us hope, ere long, the government of this country will see that "in just reason it is entitled to a share of the advandages." It were the merest puerility to argue against the admission of medical officers to military honours, on the score of the risks incurred by them as compared to those of their brother officers, for the question is only one of degree. Upon this difference, however, there has been founded, and there continues to be founded, the most grievous injustice.

The first of military authorities acted very differently from this. Napoleon bestowed military honours on his surgeons in the field of battle; and Marshals Soult and Ney have never been heard to complain that Barons Larrey, Percy, and Desgenettes, received from their great master the highest military rewards and distinctions. On the contrary, these commanders viewed with satisfaction the elevation of men whose claims for duties long and faithfully discharged well entitled them to honours,—of men who, through the advancement of military surgery, had conferred long and lasting benefits on the fleets and armies of France; while he, who was at once General and Emperor, deemed the honours conferred on such men as called for alike by justice and necessity, in any plan which pretended to "give consistency to the system of recompenses" granted by the state to its servants. It must be a subject of regret and surprise, that on the score of common justice, and for the efficiency of the public service, a similar course to that followed by all continental nations has not been adopted in this country. Our military surgeons are not surpassed by any in the world. They possess the feelings that are common to other men; and they know that just and considerate rewards would excite to increased exertions in their branch, as they do, and have done, in all others of the public service. But, up to this hour, their claims on the State for their vast services have remained unheeded; the worst principles of the worst corporations have been applied to their unquestioned deserts.

Military men, too,—even those of station and influence,—have failed to exhibit the generosity and the justice (for we here refuse to speak of gratitude) that might naturally be expected from men serving with our surgeons, knowing and feeling, as they must do, the value of their services to the army, in peace and in war. But, unlike the officers of other armies, our generals act as if they considered that whatever is given to the military surgeon is something taken from them. This is an erroneous, limited, and ungenerous view of an important public question; for whatever may be given to our surgeons will never interfere either with the commands or with the off-reckonings of our generals.

It is surprising that men should live a long life in the public employ, and not yet perceive the depressing and injurious influences on the public services, of restrictions and distinctions that, upon consideration, must prove to be nothing less than a disgrace to the institutions of this country.

A consideration of the history of the rise and progress of the legal professions, in England and France, will make it sufficiently clear that, to the high station which was occupied, and which has continued to be occupied, by its professors, is mainly due that the theory and practice of the law have attained to such excellence in both countries.

Where would have been the exploits of our navy and army, and where the great works of our divines and lawyers, had the navy and army, the church and the law, been treated on a principle of uniform neglect by the authorities of the State?

It is true that, of high estimation in society, grounded on high moral and intellectual quality, physicians and surgeons have had, and always will have, ample share. But this is a reward beyond Governments. It may be sufficient for a good man, perhaps; *but the principle of leaving men to "the reward which is within themselves," has not been acted on in England in regard to any other profession than the medical;* and we will venture to say, that a trial of it during six months only of active warfare would prove such a scheme of recompense to be as fatal to the interests of the public as unjust and ungrateful to individuals.

⁂ We fully agree in the above remarks extracted from the Times, and we trust that their publication and diffusion may be the means of directing the attention of Government to the removal of a grievance of which the medical officers in our army and navy have just reason to complain.

ROYAL COLLEGE OF SURGEONS.

At a meeting of the Council of this College, Mr. William Lawrence, F.R.S., Surgeon to St. Bartholomew's Hospital, was elected President; Mr. Benjamin Travers, F.R.S., Surgeon to St. Thomas's Hospital, Senior Vice-President; and Mr. Edward Stanley, F.R.S., Surgeon to St. Bartholomew's Hospital, Junior Vice-President, for the year ensuing.

WESTERN GENERAL DISPENSARY.

Dr. J. Hennen has been elected additional Physician to this dispensary.

THE CASE OF THE LATE GENERAL DICK.

In September last we directed the attention of the profession to the case of General Dick *. Our readers will remember that we strongly objected to the proceedings of the coroner of Bath, in ordering the exhumation of the body of the deceased after seventeen months' interment, upon the vague suspicions of an individual discontented, as it appears, with the provisions of his father's will. There was not the slightest reason to suppose that the deceased had come to his death by violent and unnatural means. A respectable physician was called in immediately after his seizure; he made a full inquiry, and pronounced that death was caused by serous apoplexy. Because no serous effusion was found in the cranium after *seventeen months*, and because the stomach and intestines were found *reddened*, it was inferred that serous apoplexy was not the cause of death; and the jury were led to return a verdict quite inconsistent, we believe, with the facts proved in the case, and reflecting seriously upon the innocent members of the family—"that the deceased had died from inflammation of the stomach and bowels, but *how produced* there is no evidence to show!"

This was quite sufficient for the public; the cause was different from that assigned at the time of death:—inflammation of the stomach and bowels is well known to be caused by arsenic and some other poisons, not always found in dead bodies; and the "*how produced*" was left by the jury to be construed in any way the public pleased.

This is altogether a sad case, and a sad result has followed it in the death of the daughter, according to a report of some recent proceedings in the Prerogative Court of Canterbury.

The son of the General, at whose "earnest request" the dead body was ordered to be exhumed by the coroner so long after interment—and an inquisition instituted, the object of which as it appears could only be to impute murder by poison to his sister—opposed probate of the General's testamentary papers. The case was decided in the Prerogative Court, on the 4th of the present month. The opposition, which had been based on an alleged impairment of the bodily and mental faculties of the deceased, who was between eighty and ninety years of age, was then withdrawn. The counsel employed by the son admitted that there was no ground for the assertion made, that the daughter had poisoned the father for the purpose of taking possession of the property. The daughter is dead, and the counsel for her representatives declared that she had fallen a sacrifice to the false charge which had been made against her. We quote the following remarks of the judge, Sir H. J. Fust, from the report of the proceedings:—

"I am of opinion that there is no ground whatever for the opposition to the will, and that the charges made are most unfounded charges. The only ground that Mr. Stuart Dick has for his opposition is, that the disposition is different from former testamentary acts. Not one of the witnesses says that the deceased's mind was in the least degree enfeebled. There is not the slightest ground for the fraud which is charged, and not only fraud but murder is charged, as committed in order to get possession of the property; and the body of the deceased, after a twelvemonth had elapsed, is taken up, and a *post-mortem* examination takes place, and an inquest is held, and it is suggested that a false representation was made to the son in India, and that the deceased, according to the situation in which he was found, died apparently from poison. The jury returned a verdict with which, according to the evidence of the coroner himself, he was very well satisfied, that they were of opinion that the deceased died from natural causes,—whether from inflammation of the stomach or not; one medical gentleman considers that he died of serous apoplexy: but there is no doubt of the fact that he did die a natural death, and that there is no ground whatever for the opposition which has been offered, still less for the unfounded charges, and the gross charges, which have been made against the party; and as to the costs of the party opposing the will being paid out of the estate, it is out of the question; the only question is, whether I should not condemn the party in the whole of the costs (which, under ordinary circumstances, I should do), or, in order to mark the sense which the Court entertains of the unfounded nature of the charges, whether it should condemn him in a sum *nomine expensarum*; I am inclined to take the latter course, and I condemn the party opposing the will in £100 *nomine expensarum*."

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

Friday, *July* 10.—D. Chalmers.—W. Haines.—J. G. Oakshott.—H. T. L. Rooke.—G. E. Freeman.—A. C. Croft.—R. Vardy.—G. Henty.—H. R. Collins.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

Thursday, *July* 9.—John Chas. Lory Marsh.—John Bassett, Countesthorpe, near Leicester.—Charles Walker, Matlock, Derbyshire.—Edw. Warburton, Pateley Bridge, Yorkshire.—John Dowker, Laysthorpe, Yorkshire.—Joseph Boland.

---

* Vol. xxxvi. pp. 855 and 908.

Lectures.

SUBSTANCE OF A

LINICAL LECTURE,

en at St. George's Hospital,

y Cæsar Hawkins, Esq.
Surgeon to the Hospital.
June 9th, 1846.

s and Ulceration of Intervertebral
nce—Disease of Hip-Joint.
legia—Disease of Medulla Oblon-
?).
plegia—Injury of Back—Disease
nal Cord (?).
plegia—Injury of Side—Disease
nary Organs — Disease of Spinal
?).
legia—Hysteria.

inical lecture which I gave a fortnight
ought under your notice a series of
illustrate the common but impor-
ject of caries of the spinal column;
ng them was the case of a man
Critcher*, who had then, as we
ot many days to live: he has since
austed on the 5th of June, and this
cord of his post-mortem examina-
e register.

well formed, but very much ema-
A small sore not exposing the bone
n the sacral region. Two openings
e bone was exposed existed in the
of the anterior superior spinous
of the left side, and a small opening
ght lumbar region.

sen.—With the exception of the
eing exsanguine, they were all for
ter part of a healthy appearance.
en, however, was not only very
: soft and pultaceous. The disease
ine had apparently originated in the
rt of the dorsal region, between the
sal and first lumbar vertebræ; the
f these bones were partially de-
t the under and upper surface of
ctive vertebræ, and the interverte-
tilage had entirely disappeared: a
tero-posterior curvature was thus
d. From these parts of the spine
ter had made its way along both
scles; on the right side it had also
behind the kidney, and in this
region a small probe was passed
the opening mentioned above, which
ated on the outer margin of the
s lumborum. In the iliac fossa of this side the anterior crural nerve was laid bare, and very much pushed out of its place, forming an extensive curve, with its convexity outwards:—(in which circumstance you see ample reason for the acute pains in the groins and thighs often felt in cases of this description, and which I mentioned in my former lecture as occasioning the idea of the case being one of diseased hip, when it really existed in the spine). The pouch of the matter terminated in the groin in its usual position.

On the left side, the matter, after having passed along the psoas muscle, had extensively destroyed the iliacus muscle, but the surface of the bone was covered over by a thick layer of soft vascular granulations. At Poupart's ligament this matter in passing into the groin, had taken two different courses; one of these channels passed to the outer side, and terminated in a pouch above the sartorius muscle; the other channel passed in the direction of the tendon of the psoas and iliacus, having the vessels above and to the inner side; this pouch communicated with a large quantity of scrofulous matter in connexion with the hip, but the capsular ligament was not destroyed; the cartilages were extensively absorbed; the bones, however, were not softer than natural. The matter which was found in these various pouches connected with the disease of the spine was very foul, and of a dark colour. A small portion of the crest of the ilium was exposed.

A patch of miliary tubercles existed at the apex of the left lung. Both lungs were anteriorly emphysematous, and posteriorly they were loaded with red frothy serum; old and partial adhesions existed on both sides: heart healthy.

This account presents us very nearly with what was expected, and it bears much resemblance to the case of Baggett, which was recently fatal. It appears, indeed, that the disease of the spine probably commenced in the intervertebral substance instead of in the bone, as is usual in scrofulous caries, but still it was not the usual disease of this substance in adults, and was no doubt scrofulous in its origin, in whichever of the two textures it actually commenced; and the effects of the disease were very like those of the case from which this preparation on the table was taken, which is manifestly accompanied with strumous deposit, but has also destroyed more of the cartilage than of the bone.

You perceive that the disease of the hip-joint, which we anticipated, had not gone to the extent of forming one cavity with the abscesses, and ending in dislocation, as in Baggett's case, but we could more perfectly recognise the exact period when the proximity of the pus of the psoas abscess, with

---

See p. 1110 of the last volume.

the capsular ligament, occasioned the inflammation and at last the destruction of the interior of the joint.

You perceive, also, from the account I have read that there was one spot of commencing phthisical disease, but that the long-continued cough and purulent expectoration which he laboured under were, as in Baggett, not owing to this, but to the congestion of the lungs, of which there was evidence during life, as well as in the examination after death; and the scrofulous deposit which was just commencing in the lung was only the sequel of this.

Since my former lecture, another patient, a woman of the name of Page, has also died; but having left the hospital at her own desire, we have had no opportunity of ascertaining whether the abscess of the nates, which I spoke to you of, originated in disease of the spine, or sacrum, or innominatum*.

We have seen from the series of cases which have passed under review that caries of the spine may affect the function of the spinal marrow so as to cause paraplegia of the lower extremities, or even of the arms also, if it be situated high up; and palsy of the bladder and rectum, and of the muscles of the abdomen and trunk of the body; that the paralysis may be total, with the muscles flaccid; or may be accompanied with spasm, so that the muscles are constantly stiff and the joints fixed, or the limbs involuntarily moved about by contractions of the muscles. We have also seen, that occasionally, but not nearly so often, the sensation is impaired, as well as voluntary power, so that there may be numbness, or even entire loss of sensation: the temperature and nutrition of the parts thus more or less deprived of nervous power are generally maintained in cases of caries, but sloughing of the parts on which the patients lie sometimes takes place; as in all weak persons, who are emaciated. All these effects are evidently independent of direct pressure on the spinal marrow in most cases, so that they may be strongly marked when there is no curvature whatever, and there may be a very acute angular curve in the spine without any paralysis; the influence upon the functions of the medulla being no doubt in general owing to the state of circulation in itself or its meninges from the contiguity of the diseased bones or abscess, and being therefore very variable in many cases.

There are, however, various other causes of paraplegia besides the common disease of the spinal column, some causing irritation by the changes in the circulation, some by simple pressure, and some by organic changes in the spinal marrow; the diagnosis of diseases of the spinal marrow, and the parts around it, is therefore extremely obscure and difficult.

II. Nay, it is sometimes far from an easy task to decide whether paraplegia depends on disease of the spine at all, or whether it has not a cerebral origin, by which the influence of the brain upon the spinal marrow is in some measure intercepted. There is now a little boy under the physician's care, whom I have been asked to examine on account of this very obscurity. He has incomplete paraplegia, so that he cannot in the least support himself by his lower limbs, though he can move them as he lies in bed; but he retains power over the arms, so that he can for a time support himself upon his hands, if he is seated upright in bed; he cannot, however, raise himself from the horizontal posture, or move in any way, and the long muscles of the spine are wholly paralysed, so that in whatever direction the head is turned to that side the spine inclines in a complete circle, if he is partially supported; otherwise he necessarily falls to the side to which the centre of gravity is inclined; and when he has fallen down on the bed, however twisted and awkward his posture, he cannot alter it himself: his head alone can be voluntarily turned. There is no pain or tenderness, however, in any part of the spine; if you look at it when curved forwards you perceive no angle, but it is a general circle, because the long muscles are palsied, and you see that it has nothing to do with altered figure of the spinal column, because you can make the curve posterior, or anterior, or lateral, by inclining the head, that is, the weight of the upper part of the body, in this or that direction. Such a circumstance as this shows you at once the palsy of the long muscles on which it depends, and is an important distinction between a circular and varying curve, and a permanent one from diseased spinal column, whether it be an obtuse or acute angle, whether it be posterior or lateral.

My impression therefore is, that the paraplegia has a cerebral origin, and probably in the medulla oblongata or cerebellum; at any rate, very high up, which seems to be confirmed also by complaint of the pain in the head, and general illness. You may ask whether this is likely to be the case since the arms are not so much paralysed as the legs; but, in fact, you may constantly see, in cases of apoplexy with hemiplegia, that the arm is much less palsied, and recovers itself sooner than the lower limb. I have therefore left this boy under Dr. Nairne's care; still, as I have only seen him once since his admission a few days ago, and such cases are, as I have often told you, obscure, I recommend your watching shall probably see him again

---

* See page 1116 of the last volume.

r case, which is obscure both as
and seat of the disease, is that
s, æt. 60, who was admitted
f April for an injury of the
mplained of pains in the loins
rt of the back, with general
he whole of the spine, but
ular prominence of any of the
es, and with no pain if the
conversing during the exami-
h he jumps violently when
her times. He says it was
all which he had about two
He has been out of employ-
not lived well lately. Sleeps
wels regular; tongue clean;
good, but he has an anxious
countenance. I was half
st, with the peculiar circum-
alleged pain, and with the
nt of work, to suspect that
ed for a little of the hospital
sometimes the case; but the
untenance was against the
nd as it afterwards went off
lessened, I was obliged in a
conclude that the suffering of
s real.
s one arising from a fall, but
ould not be the result of any
effects of an accident, and he
existed before the fall: there
of the spine especially com-
d it was not likely to be a
r inflammation of any of the
rcular curve was more like
y whose case I have alluded
ere might be disease of the
gata; yet it was apparently
d therefore must be connected
marrow, and probably in the
part of the back, since all the
of the back were in some
ysed: what was its exact
d not feel certain; whether
gestion or watery effusion or
he spinal marrow, or some
meninges, making pressure
ord. With this view, as soon
ied that there was real disease,
ter to the spine on the 13th,
his diet, as he complained of
.

rigin of the complaint seemed
obable as fresh symptoms
lves: it became evident that
neral curve from palsy, or
he long muscles of the back,
loss of power over the mus-
omen and of the lower limbs,
tion also became impaired.
the notes say—Pain in the
nt, but it is still bent, and he
complains of weakness of spine, coldness of the legs and feet, and a feeling of spasm or twisting round the upper part of the abdomen. On the 24th, complains of coldness of the feet, and a peculiar twinging around the lower part of the chest, and he had some difficulty in moving the legs. At the same time he slept well, and his appetite was good, and he no longer looked so ill. These symptoms, then, shewed an affection of the whole spinal marrow—the posterior column as well as the anterior; motion and sensation both lessened; the temperature lessened, independent, as it seemed, of the circulation, and therefore influenced through the nerves; and various pains complained of, varying in situation, and referred only to the distribution of the nerves, while the cause was situated at their origin, or in their course.

On this view of the case was the treatment conducted, which has been moderate support in food, and latterly a little wine, as he was weakened by an attack of diarrhœa; while counter-irritants have been employed, five or six blisters having been applied along the spine, from which he always derived benefit, and often asked for them to be repeated. On the 17th of April the note says—much less pain from the application of the blister; on the 24th, after the second blister,—feels rather better; no pain. On the 29th, complains of weakness and soreness, but no pain in the back; the feet are warmer. May 4th, after a third blister, much better; health improves; the blister has relieved the weakness of the back, and he can move the legs better, and their temperature is more natural. On the 11th, less weakness of the back, and he can move it better, and it gets less curved.

But although improved, it was evident he was no cured, and on May 25th it is said—He has no pain in the back, but he complains of some pain in the left side, which was about the lower ribs, and he has the twitching of the side occasionally. June 1st: still complains of pain in the left side, but none in the back. No weakness of the legs: says his health is much improved. He wished for a blister for this pain, but looking at it only as a nervous pain, the cause of which was elsewhere, I contented myself with ordering a mustard-poultice. On the 3d, however, the house-surgeon, at his own request, gave him a blister, which is now giving him some pain by its inflammation. Applied in this way, this remedy acts on the extremities only of the nerves, but yet they remove pain, as you see, by applying a blister to the painful and swelled knee, caused by disease of the hip. The other blisters were directed to the origins of the nerves.

Being now much better, I dare say he will shortly leave the hospital, so that you are not likely to see the real cause of his present condition, whether it be water or solid deposit, or softening, or only deranged circulation in the medulla, or whether it be some disease of the parts around the spinal marrow. It is probable that the symptoms will continue more or less for some time, and in some obscure cases like this the palsy or other affections of the parts deprived of nervous power will continue for many years, or there may be intervals of some time, and then they return again after a year or two, but are not fatal at all, or not for many years. I expect a relapse, however, before very long. There did not appear to me to be any reason for depletion, nor has cupping or other loss of blood much power over the spinal marrow; it is sometimes right in an acute case with a full habit, but not in a chronic case like this, with the circulation weak. Neither did there seem to be any use in giving mercury; this remedy has but little power, compared with its influence on the brain, and its use, where there is suspicion of softening, is contraindicated; the debility occasioned by it would be injurious instead of beneficial.

IV. The next is a complicated as well as obscure and doubtful case.

Edward Warman, 55 years of age, was admitted under Dr. Nairne for obscure pain in the side and back, with rheumatism, and with some urinary symptoms also. He complained of pain around the loins and on the left side behind the lower ribs, and thence to the spine, and there was some tenderness of this part, but without any apparent fulness; and there was some weakness and inability to use the legs. He had pain in the bladder, and great difficulty in making water, which contained pus, but was slightly acid; there was also incontinence of urine when he was asleep, and the prostate, when examined by a catheter, was found to be enlarged, though not much, and there was some urine and pus retained in the bladder, as he could not quite empty it. He said he never had stricture or gonorrhœa. He was of a pale unhealthy countenance, and was much emaciated and depressed, and appeared to have some dangerous complaint.

He said the pain in the side and loins arose from a fall in last September, but the prostatic symptoms, so say our notes, only commenced two days before his admission, when he had two attacks of retention, requiring his urine to be drawn off; it appeared, however, afterwards that he had had slight difficulty in making water for a year, but the incontinence had only been a week, and the retention two days, and the difficulty of micturition was so great as to require the catheter to be used for a week after his admission. He had repeatedly been cupped and blistered without benefit. With this history and these symptoms, I was asked to see him soon after his admission. The catheter showed some disease of the prostate, and the urinary symptoms were just such as the chronic enlargement of this gland occasions; gradually increasing difficulty in micturition for a year, till the mechanical obstruction occasions retention, and some water is always retained, and the urine dribbles away; the lodgment of some water, and straining, occasions inflammation of the bladder, and thence the purulent secretion of the mucous surface, with more irritation, and some blood: at the same time, it did not appear likely that the pain in the side arose from renal disease subsequent to the disease of the prostate and bladder, since the urine was still acid, while much disorganization of the kidney, with suppuration, generally makes the urine alkaline; this, on the contrary, was acid, and the pus most probably only from the bladder.

But then, besides incontinence of urine, which was apparently only from the prostatic disease, he had some loss of power over the lower limbs, with pain in the side towards the spine, coming on after an injury:—I could not find any sufficient pain or tenderness about the vertebræ to suppose that there was caries of the spine causing partial paraplegia, and there was no prominence whatever, and the pain and tenderness were all on one side of the spine and to some distance from it, and yet, without any swelling or sign of local disease likely to cause so much ill health, he looked as if he was about to sink under the malady, of whatever kind it might be; there was suspicion of rheumatism, but nothing well defined, and he was too consistent in the account of his illness dating from the fall to make it probable that there was rheumatism of the spine. Regarding the case, however, as being more probably connected with the spinal marrow than with the parts around it, he was left under the physician's care chiefly, and as a variety of local remedies had previously been used without avail, Dr. Nairne watched the patient for a time while he took infusion of diosma and hyoscyamus to improve the state of the bladder, and a morphia draught to give him sleep, and opiate liniments to rub in for the pain. The catheter was also directed to be passed daily, to prevent any irritation of the bladder by lodgement of some of the water with the pus behind the enlarged prostate.

About a month afterwards, being nearly in the same condition, he was transferred to my care, and, on May 4th, the notes say, he feels rather better, and has less difficulty in making water, which is acid and contains some pus; he has some incontinence also, and has pain in the loins, and pain and numbness of the legs, with great weakness of their movements. On the 10th, the instrument has not been passed for three days, the incontinence and difficulty of micturition being lessened, but when passed to-day a large quantity of pus was drawn off which had been for these three days settling in the bladder, and lodged behind the prostate, the clear urine only coming away when he made water himself. He gets weaker, and still has the pain in the loins and bladder. Urine slightly acid. He had no fresh symptom which looked like disease of the kidney, though some alteration and even suppuration often comes on with very obscure evidence for some time.

My attention was more directed, however, now than it had been before, to the spinal symptoms, by an aggravation of them soon after he was transferred to my care. On May 14th, it is said he has numbness of both sides, from the anterior superior spinous process of the ilium to the knees, and entire loss of sensation from the knees to the toes, with complete inability to move the legs; this came on last night, but there has been slight difficulty for the last week. There is incontinence of urine, which is highly alkaline and ammoniacal, and contains a good deal of pus. The 15th, he moved his legs partially in the early part of the morning, but still has the numbness of the legs; he complained of great pain in the region of the bladder this morning, and about a pint and half of highly ammoniacal and purulent urine was drawn off; he complains of pain in the back, and seems to be much weaker. On the 16th, there is a variation in the amount; he can move the right leg better, but has no sensation or power of motion of the left. On the 18th, there was a fresh symptom—namely, incontinence of fæces, and the urine was neutral. On the 20th, he can move the right leg, but the left only slightly; sensation is perfect in both legs; there is still incontinence of urine and fæces; abdomen tympanitic. On the 22d, rather better; has a good deal of pain in the loins and back; sensations of both legs; only motion of the left one, which is the exact reverse of what was the case before; less incontinence of fæces; urine neutral. On the 25th, more motion and sensation of both legs, but he complains of pain in both iliac bones, which extends down the left thigh and leg. Has some pain in the bladder and in the back; no incontinence of fæces or of the urine, which is highly alkaline, and contains a good deal of mucus and pus. No rigors, but a good deal of fever. In some respects, then, he was improving; but this feverish attack made me leave off the wine and porter which he was taking, and apply a blister to the loins, which seemed to do him good, as on the 28th the notes say, less pain in the side and loins, and he feels much better; less pus in the urine, which is neutral, which was the same next day, when it was also noted that there was more power over the legs, and on June 3d the urine was again acid, with less pus. But still he could not be considered as essentially better as to the spine or in his general state, for on the 5th it is said, there is more aching in the legs, some pain in the left iliac fossa, the legs cannot be moved so well, and there is a small slough over the right ankle and on the left heel, and one on the sacrum, and he feels much weaker. I was obliged, therefore, with this evidence of deficient nervous energy, to return to some wine, having given him previously some porter, and the report, yesterday the 8th, is, that he was improved, and had more sensation and motion of the legs, and that the sloughs were separating, and he had no pain in the back; he had still incontinence of urine, which was slightly alkaline, and contained less pus.

I may observe that he presented us with an example of the curious reasoning often resorted to. I wished to place him on a water-bed on account of the sloughing, but he refused; because he had seen some one die who had lain on one, he thought he must also die if he was changed from his present bed to the water-bed.

There has been, then, more complete paraplegia, both of motion and sensation, with pain and loss of nutrition, which came on somewhat suddenly, and has been very variable since, and the urine became suddenly worse, highly ammoniacal directly after the attack, and has only once been noted as acid since that time, though there is as yet no positive evidence of renal disease. We are, however, just as much in the dark, as at the beginning, with regard to the real cause of his illness. It appears to have no cerebral origin, for his mind has never been affected, and he has referred nothing to the head; but what change may have taken place in or around the spinal marrow we cannot say. He was obviously very ill from the first, and does not seem now to be likely to recover, but, as in the last case, any organic change affecting the spinal marrow, directly or indirectly, would account for his paralytic symptoms.

But there is in this case a combination of disease of the urinary organs with impaired functions of the spinal marrow, and Mr. Stanley, whose practical remarks always deserve much attention, has published a paper in the Medico-Chirurgical Transactions, in which he relates some cases in which no apparent disease existed in the spinal marrow, though there were, as in our patient, symptoms of much loss of nervous energy, both motion and sensation being impaired; and Mr. Stanley supposes that this arose from disease of the kidneys: he imagines that irritation is conveyed from the kidney by its nerves to the spinal marrow, and that thence it is propagated in a reflected manner down the nerves, both of motion and sensation, arising from the spinal marrow, and passing to the lower part of the body. I was not convinced, however, of the truth of this, when I heard the paper read, nor have I seen anything since which makes me think that the opinion is correct.

It is well known that injuries and diseases of the spinal marrow influence the functions and structure of the kidneys, as for instance in the patient from whom I removed this fractured spine, who lived long enough to have the fracture united, after the fragment had been pressed in so as to crush the spinal marrow, causing immediate paraplegia and loss of sensation, shortly succeeded by alkaline urine, altered temperature of the limbs, which was 10 or 12 degrees above the natural standard, and impaired nutrition and sloughing of the parts which had been deprived of nervous energy; in him there was inflammation and sloughing of the bladder, and inflammation of the ureters and kidneys, which had numerous abscesses within their cortical structure. The same changes in the kidney are also constantly observed in diseases of the spinal marrow. And this effect of spinal disease upon the functions and structure of the kidney will come on very rapidly in some cases: for example, a gentleman who was in perfect health to all appearance was suddenly seized, a fortnight only before his death, with paraplegic loss of sensation and motion in the lower extremities, and then by sloughing, of which he died, and in the spinal canal was about three quarters of an ounce of water, and a portion of ossific matter in the membrane of the size of a pea, and there was much inflammation, not yet, however, amounting to abscess in the kidneys. I cannot help thinking, therefore, that this effect of spinal disease on the kidneys was probable in at least some of the cases related by Mr. Stanley, rather than the reflected influence of the renal disease upon the spinal marrow and its nerves.

I may observe, that nothing morbid being detected in the brain or spinal marrow after death, is no proof that there is no change whatever in their structure, for such changes are confessedly very minute in some cases, and in some of the instances brought forward there was in fact a little water, and vascularity, though it is supposed they were not sufficient to account for the loss of function in the nerves. Were the opinions well founded it would seem necessary that the effect should be more frequently observed; you see many cases every year of fatal disorganization of the kidneys from stricture or diseased prostate, or uterus, or stone, but if you examine a hundred of them in succession you will perhaps find no paraplegia resulting from the renal disease; and again in the medical wards you witness many fatal disorders of these organs, but no effect from them upon the spinal marrow. On the other hand, you never see serious organic changes of the spinal marrow without disorder of the function or structure of the kidney following them. And further, if disease of the kidneys occasioned reflected morbid action, we ought to expect that the same result would be constantly seen from disease of the uterus, or liver, or lungs, or other parts of the body, which has not been alleged.

Perhaps you may ask how it is, that in diseases of the spinal column, of which I spoke in a recent lecture and at the beginning of the present one, you do not see diseases of the kidney produced? The reason, however, seems an obvious one; namely, that caries of the spine affects the anterior part only of the spinal marrow in most cases, or at all events occasions no organic change in the spinal marrow. You may have much pressure and altered condition, such as in this preparation, where a cancerous growth projected against the spinal marrow, which is not above half its proper thickness at the part, but there was no softening or other change of structure, and therefore the effect on the kidney was only to make the urine permanently alkaline for many months, without any inflammation or sloughing; a fact moreover which shews that in the rapid changes observed in the urinary organs after injuries or tumors, or softening of the spinal marrow, it is not the alkalescence of the urine alone which occasions them, but chiefly the loss of nervous power, shewn in them in the same way as in the external parts of the lower half of the body; and this influence on the kidney I believe to be felt, along with the deranged temperature and lowered vital powers, not when the anterior part of the spinal marrow is disorganized, but when the change of structure has taken place in the posterior part.

Our patient, then, has, in all probability, some disease of the spinal marrow, or the parts around it, which will probably be fatal; but his disease of the urinary organs appears to have no direct connection with this affection of the spine, except so far that the alkaline state of the urine came on suddenly, when the peraplegia was found so quickly getting worse, and perhaps depended on the condition of the spine, which aggravated the already existing renal irritation, whether there is or is not any change of structure in the kidneys. I suppose we shall have an opportunity before long of ascertaining the truth.

V. The next case which I will bring under consideration is one of paraplegia from a very different cause, and which is apparently only functional; it is the case of Mary Ann Searle, 20 years of age, who was admitted on the 11th of February. About seven years ago she was in the Exeter Hospital for some tumor in the right hypochondrium, which was removed, and she has a large cicatrix left by the operation, and also one of an abscess in the left groin. Seven weeks ago she hurt her back against the corner of a sideboard, which has disabled her from walking. On examination of the spine, her pain is referred to no particular part, but she complains of acute sensibility every where on the slightest touch; and she says that she is now, and has been for a fortnight, unable to pass her water without the catheter, and that seven years ago the same thing happened. She has no power of lifting her legs from the bed, and sensation is also somewhat impaired. The catamenia are always irregular; they occurred two months ago, and not for three months before that. Bowels much confined. Leucorrhœal discharge. Urine healthy.

Here, then, was a disturbance of several functions of the body, and entire want of power over the bladder and lower limbs, both parts of the spinal marrow being affected, so that sensation as well as motion was impaired, and there could be little doubt, from the extent and peculiarity of the pain, and the calmness of the countenance, and the general history, that the paraplegia was what is termed hysterical; there was an absence of voluntary exertion, and a deficient nervous energy in the parts affected; and there is generally, also, a degree of weakness of the circulation. You must, therefore, be very cautious how you adopt any measures which lessen the vital powers still further in such cases: for example, I remember a young woman who was admitted into the hospital, under Dr. Seymour, with hysterical paraplegia, and who had, unfortunately, been bled somewhat largely before her admission, the consequence of which was an immense slough, of which she died, and from all threatening of which our patient has been free.

But this girl received a blow on the back, which was the immediate cause of the symptoms under which she laboured; might it not be, then, that there was, in fact, some serious injury, to which the hysterical symptoms had been superadded, so as to obscure the case, and conceal its real nature? Now this constantly happens, and is a source of much difficulty in diagnosis, and in the treatment of many cases; some injury or disease exists, but the acute pain and sensibility of the parts masks and obscures the ordinary signs, making the case appear much worse than it really is, or causing the actual local disease to be overloked. There is little difficulty in any case where it is purely hysterical in satisfying yourselves that the case is almost entirely of this nature, but it is not so easy to be quite certain that there is nothing else added to the hysteria. Our patient sleeps well, and looks calm and placid, and the pain was felt along the whole length of the spine, though it was greatest at the seat of the injury. A young woman was under my care, however, who was keeping house alone for her mistress, when a gentleman called, who attempted to be very rude, or worse, to her, and she was thrown against the edge of the stairs, and hurt the lower part of the back of the neck; the consequence of which was very acute pain confined to this one spot: she could not sleep, and had an anxious expression of countenance, and a quick pulse, and impaired health; yet, although these circumstances looked very like local injury of importance, I believed she was only thoroughly frightened, and simple means directed to her hysterical state of system got her well before very long.

Wherever there may be reason to entertain any doubt whatever of the existence of local disease with hysteria, I recommend you to be cautious how you decide that there is none, and adopt such measures as would be likely to aggravate the local affection. A paper was published by Dr. Wilson, of the Middlesex Hospital, in which he recommended for cases of hysteria simulating diseased joints, that the person should be placed against a wall, and supported by the nurse and some assistant, and then have the sound leg removed from her, so that the weight was obliged to be borne by the hysterical one; but a mistake in such cases would be of vast importance. I once saw a young lady, the daughter of a medical man, and Sir Benjamin Brodie saw her also with me, who had suffered for some time with painful affection of one hip, which was most acutely sensible to the touch, and we satisfied ourselves that the case must be an hysterical one, and recommended exercise with other measures adapted chiefly to hysteria, which was done with much perseverance, and with no little distress to their feelings, by the friends, on account of the pain; and for six months we flattered ourselves that the case was in the way to be cured, for the patient was able to walk about and enjoy herself, and her health improved considerably; in a year's time, however, she died with abscesses about the hip, and destruction of the head of the bone: doubtless, then, there had been some disease at the time we saw her, but completely masked by the severity of the hysterical symptoms.

Let us now see what has been the line of treatment for our patient. First, then, she was kept quiet for a time, to avoid the chance of an error in the diagnosis by the first examination, and afford the opportunity of watching her more accurately. She was obliged, at first, to have the catheter passed to draw off the water; but it was only allowed to be done when absolutely necessary from distension of the bladder: a moderate degree of pain will make the patient endeavour to evacuate the water, encouraged to contract by cold water dashed against the abdomen, who would be passive if it was permitted, for years, so that at last, perhaps, the power over the bladder might not be regained at all. I have known the action of the detrusor return after more than a year, but it has been sometimes found to be permanently lost; after some time, however, you must not run the risk of the bladder bursting or inflaming, and sloughing, from over distension. The notes say, on the 24th, that she passed her water yesterday morning of her own accord, but not since; and on March 3d it is stated that she passed her water without assistance on the 28th, and has continued to do so since; in fact, she has had command over the bladder up to the present time. Some aloes and assafœtida was at first given three times a day; and fœtid medicine will occasionally do good, when so taken, or when used in enemata; she has also required the constant use of purgatives, and she is now taking as much as ten grains of compound aloe pill with some scammony every night, with very little effect; injections also have been often used, and regularly, but the abdomen is often tumid and hard from the torpor of the bowel, which is of the same kind as the palsy of the bladder, and from loss of power over the abdominal muscles, corresponding to that of the extremities. On the 21st, a few days after her admission, satisfied that the case was in all probability unattended with disease of the spine, she was taken out of bed, and a shower-bath administered daily, which is very useful in hysterical cases, particularly if the patients do not like it, and it has been employed nearly constantly since that time. On the 27th steel was given with her aloetic medicine, and she has taken it a considerable time since, leaving it off when menstruating, which she has done twice, I think, though irregularly; and lately I have given her bark instead of steel. In by far the greater number of hysterical cases some tonics are required, especially the metallic tonics, and it is very seldom that any depletory measures are useful or proper. It is said, sometimes, that these cases are instances of spinal irritation, and cupping and other lowering measures are employed, but the number of patients who are of full habit and florid complexion is very small, and it is to them only that cupping to a small amount, on the sacrum or spine, is useful, especially if the irregularity of the function of the uterus is attended with pain; in which cases our continental practitioners would employ leeches to the uterus or pudenda more often than is done in this country.

I threatened, for some time, to use a large blister, which sometimes drives away the pain in the back; and once or twice when it has been much complained of in this case I have ordered one to the loins; I only use them when the pain is obstinate, as they confine the patients to bed, but they are very efficacious, if they become necessary. She was very soon encouraged, and in some measure forced to be up, being placed in a chair or table to try and move her legs, and crutches were at last capable of being used, which she could not do till she had been held up, and induced to try to walk by the nurses. By slow degrees she has in some measure improved, but it has been very slowly and imperfectly. The notes on March 9th say that she tries to walk a little, which was with the assistance I mention. On the 23rd it is observed that she cannot lift her feet from the bed. On April 9th the legs ache a good deal, but she cannot make the least use of them. On the 13th she is better, and can move the legs better, but they are painful at times. May 1st, is gradually getting better and stronger; but on the 11th it is stated she has lost the sensation and motion of the right leg, but the left leg is much improved, and in this state she now remains, able to walk feebly by the left leg, with crutches, but without any power over the right, which she drags after her, and cannot move the leg or foot or toes, nor do they start at all when pinched, sensation not being wholly lost, though much impaired. She has latterly had the limb galvanized, but hitherto not with any benefit. Her general health is improved a good deal, but the bowels are exceedingly torpid, and the uterus does not perform its office: it will, perhaps, therefore, be a considerable period before she is perfectly recovered from her paraplegia.

A LECTURE ON

CLINICAL OBSERVATION;

ITS VALUE AND NATURE, AND THE MODE AND MEANS OF PRACTISING IT.

Delivered at the York Medical School,

BY THOMAS LAYCOCK, M.D.
Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine.

HAVING undertaken the duty of teaching you the theory and practice of medicine, I take an early opportunity of stating to you the views which I entertain as to the mode in which our respective duties should be performed. Knowing how important it is to your friends, your profession, and to society in general, as well as to yourselves, that you should be successful in your future career; and knowing, too, the misery and disgrace which ultimately overtake the idle and vicious student, I cannot but look upon those duties as other than requiring our most strenuous efforts. Now I think we should not let the summer pass without making use of it to advance our common object. I propose making the course I shall deliver to you next winter a *demonstrative* course as much as possible, assimilating it in this respect to the lectures on anatomy, botany, chemistry, &c. But there is a numerous class of diseases almost peculiar to the summer season, and I think you might well employ your time in observing them, and making yourselves practically acquainted with their nature and treatment. I therefore invite you to communicate personally with me, that I may arrange so as to enable you to take a part in the practice of the Dispensary, by visiting patients at their own homes, reporting their cases after a method I shall give you, and witnessing the practice under the roof of the institution itself.

On the present occasion I propose giving you some instructions as to the nature, value, and objects of clinical practice, and the means and methods by which you should conduct it. Disease generally is a departure from health or ease; diseases specifically are groups of phenomena indicating the morbid state of an organ or series of organs. These phenomena may be divided into two classes. 1. You have the phenomena which indicate the morbid condition of the structure of the organ; that is, pathological anatomy. 2. You have the phenomena which indicate functional derangements of the organ; that is, semeiology or symptomatology. Now some diseases are named from the one group of phenomena, some from the other. You report a man to have died of apoplexy; you simply mean by the term apoplexy that he has been suddenly *struck down* in a manner and with symptoms which indicate functional derangement within the cranium; but the term gives you no idea of the pathological change excited in the encephalon. If, however, you report a death from arachnitis, you use a term which indicates both the structure affected, the arachnoid membrane, and the pathological changes in the structure, the changes consequent on inflammation. But during life you derive your knowledge of this structural change from clinical observation only; it is a deduction from a generalization of phenomena observed by you. If, then, your observation be superficial or careless, or imperfect from any cause whatever, your deduction will be erroneous, your treatment wrong, your reputation wounded, and your professional success endangered; and you will be tempted to make chicanery and falsehood the means of escape from the consequences of your fault.

Another remark will show you the nature and value of clinical observation. All medical art is the result of experience; all systems of medicine are intended to place that experience in an accessible form. For many hundreds of years skilful observers have been engaged in adding to this experience, and from time to time the whole has been remodelled; that is to say, a new system of medicine has been brought forward by some comprehensive mind. Now you will not be able to comprehend these writers, you will derive no benefit from a perusal of the records of their experience, or from that digest of it which I shall present to you, unless you have made yourself practically and personally acquainted with the phenomena of disease. You must learn the alphabet of their language at the bed-side of the sick; there you must con your lesson, and learn to read disease; there you must store up that vast amount of elementary observation which will render your study of medical literature profitable, and your practice of the medical art pleasing and successful.

Now the "how to observe" is of very great importance; you should carefully study this. There is a deep philosophy in it; a philosophy that required the mind of a Bacon to establish; and yet it is a simple philosophy, and founded on very simple principles. Probably it is this very simplicity which leads some minds so far astray; men are apt to look for something marvellous, and that is often considered marvellous which is so simply from want of knowledge, or due inquiry and thought. The inductive philosophy is founded—1st, on accurate observation; 2d, on accurate classification; 3d, on accurate generalization. All men observe, class, and generalize, instinctively; the child just learning to speak as well as the most experienced philosopher. The difference between them is, that the one knows how to avoid error, being taught by reading, experience, and meditation. I would therefore strongly recommend to your perusal the works of those masters in philosophy who have treated on this subject. Bacon's Novum Organon should be well read, and in the Latin. You will keep up your knowledge of that language thereby, and at the same time form your style. Herschel's Introduction to the Study of Natural Philosophy is a charming book; I should recommend it in preference to Whewell's History of the Inductive Sciences. But Whewell's book is also most worthy your attention. His faults arise in some degree from his profession. Every professional man converts all mental aliment into his own nature, just as he converts his bodily food. Our own profession is not exempt from this infirmity; I think it is more exempt nevertheless than any other; and yet this opinion may be a prejudice. Now Herschel is a philosopher by profession; Vice-Chancellor Whewell a theologian. I would therefore recommend you, if you read his work, to read also an elegantly written criticism upon it in the fifth volume of the British and Foreign Medical Review. The writer of that criticism must certainly have been a physiologist, he also follows his peculiar bias, but his observations apply equally as forcibly to clinical medicine as to physiology. The grand fundamental principle in observation is accurate observation; the most essential requisite to accurate observation is a thorough conviction of your great and continual liability to err. When a man says, "surely I may believe my own eyes," or "surely I may trust my own senses," you may pronounce him to be unlearned in true philosophy.

This point brings me to the instruments necessary to clinical observation. And here I may be permitted to quote the instaurator of modern philosophy, whose great work I have recommended to you for careful perusal. It is his second aphorism, De Interpretatione naturæ. "*Nec manus nuda, nec intellectus sibi permissus, multum valet. Instrumentis et auxiliis res perficitur; quibus opus est, non minus ad intellectum, quam ad manum.*"

You already know well how essential it is to the advancement of knowledge that our senses should be aided. In chemistry you have the thermometer and fifty other instruments of research. In physiology the microscope is as essential as the telescope in astronomy. Pathology has also its instruments, and clinical observation requires its aids to the senses and to the intellect. The aids to the senses may be arranged in three classes according to their use. Firstly, you have the aids to vision; secondly, to hearing; thirdly, to the touch. As the latter belong chiefly to the surgical department of medicine, I shall leave the description of these to your teacher of surgery.

The microscope has become an essential instrument in clinical research, and is now to be had very cheap. For ordinary purposes, however, lenses are sufficient, and are much more convenient. Here are three kinds. This is my clinical companion; it is called a Coddington lens, but I think is not inferior to the common double lens; they both (as well as this, the Stanhope lens), are extremely portable, not being larger, including case, than your thumb. The Stanhope lens is useful in this way; you can place any thing to be observed upon one surface of it. The object must, however, be transparent or semi-transparent. Crystals, fluids of various kinds, &c. are very suitable to this lens. These aids to vision are useful in many diseases; you gain a better knowledge of the excretions and of many morbid products by them; cutaneous diseases in particular are worthy of investigation by their instrumentality.

Certain cavities of the body are much better investigated by specula than by the unassisted eye. Here is a mouth-speculum, which serves the purpose of the silver spoon in keeping down the tongue, and at the same time keeps the mouth open, and so leaves your hand at liberty, either to direct artificial light upon the fauces or apply topical remedies to them. The ear-specula before you have a similarity, inasmuch as they are all more or less in the form of hollow cones. This is Weiss' speculum; it is simply a hollow case of silver; this is Cramer's, a smaller size, and the cone is divided into halves moveable upon a pivot. This is Curtis's, and is somewhat like the preceding, but less, and I understand is seldom used by surgeons. Of the other two, the second mentioned is to be preferred.

The numerous physiological relations of the uterus to other organs, either directly or indirectly through the ovaria, render a knowledge of its diseases of great importance to the practitioner; and to facilitate the acquisition of this knowledge various forms of specula vaginæ have been devised. This is the expensive old-fashioned form, opening with blades. Ricord's is on an analogous principle, but having two blades only, which are opened by a simpler method. Next, hollow tubes were brought into use. Here is one invented by Mr. Protheroe Smith. It is of glass, enclosed in a gilt metal (German silver) case. Its obturator is both a porte-caustique and a porte-sponge. Next, the glass tube was silvered, and enclosed externally in caoutchouc, as in this example; and this is the most modern device. You will find in the last volume of Braithwaite's Retrospect the drawing and description of three or four new speculæ: there seems to be a rage for the invention of these just now. I would caution you, however, against their indiscriminate use. An old established practitioner may use them much more safely than a young one; you might, if not cautious, expose yourselves to unpleasant scandal by the employment of this instrument. At the same time you must know that it is a very valuable instrument, and it is only the feelings and prejudices of the sex which limit its utility. The parturient customs prevalent on the continent diminish the force of the prejudices and objections against its use abroad. Those customs are very different in England; here females are rarely exposed during labour as they are on the continent, and hence English women submit to the application of the instrument with greater reluctance.

The aids to the sense of hearing are the sound, the pleximeter, and the stethoscope. Here is a pleximeter, invented by Dr. Williams, with a suitable percussor. Pleximeters are also made of ivory, caoutchouc, or wood, and are struck with the tip of the finger. I do not think you can have, all things considered, a more effectual or convenient pleximeter and percussor than the middle joint of one middle finger and the tip of the other. The art of percussion consists rather in the mode than the means used: simple as it appears, it requires practice and tact. I may observe that the term pleximeter is an incorrect one to apply to this means or aid; it *measures* nothing, and is therefore no meter.

The stethoscope is an auxiliary to the sense of hearing of very recent application. It seems extraordinary to us how it could have happened that its value should have remained so long undiscovered. We shall have opportunities for discussing its uses in detail; I content myself with submitting to your inspection some varieties in the form of the instrument, and in the wood it is made of. This of Laennec's,—a cylinder of cedar wood,—is as good, I believe, as any, and perhaps better than most, but it fills your pocket like a duelling-pistol. This was the stethoscope used by Louis at the time I followed his clinique. It is furnished with an ivory pleximeter, moveable ear-piece, and an obturator, and is more portable than Laennec's. This is the kind I use at present: I believe Dr. Billing's name is attached to it. It is without obturator or pleximeter, and is simply a good stout cylinder, with moveable ivory ear-piece. The more popular form is this, to which the name of Macdouall is affixed. It is, I think, too slender, but stethoscopes are like fowling-pieces; every man can use that best to which he is accustomed. Here is one (Dr. Davies's) which draws out like a pocket telescope. It has the advantage of removing your head to a greater distance from the patient, and those who use it with a proper ear-piece (for this will not do) think it as effectual as these short thick cylinders not more than four inches in length. With regard to stethoscopes, I think the same remark is applicable to them as to pleximeters; the kind of instrument is of much less consequence than your tact in the use of it.

The aids to the intellect are those which enable you to measure the numerical relations of time and space, and to estimate the qualities of matter. These are truly meters. One of them is an apparatus for measuring the capacity of the chest; it is termed a pnoiometer,—a breath-measure. In Germany some stethoscopes have it attached to them. I have been given to understand, that Mr. Sibson, of the Nottingham Hospital, already favourably known by his contributions to the art of exploration (for that is the technical designation of this part of the subject) is about to bring out an apparatus of this kind.

Measuring tapes are very useful. Here is the kind I use. It is 40 inches long; is wound up by a spring, and is only so large as a crown-piece. It is marked "Chesterman's patent." The case would be better if made of ivory.

Your watch is, of course, your time-measure, or chronometer. This is an indispensable companion, and I would advise you to take every opportunity of using it in measuring thoracic or cardiac action. By this means you will acquire tact in the estimate of the frequency of the pulse and of the respiration. The thermometer or heat-measure should also at first be a frequent companion. There is a case made which contains it, and also another important meter,—the urinometer. The urinometer does not measure the *quantity* of urine (as its somewhat barbarous name would imply) but its specific gravity. Of course chemical analysis is an important aid to the intellect in clinical observation. The difficulty in its use is, that the requisite apparatus is too complex to be portable or facile in application. The little case containing the thermometer and urinometer is furnished also with litmus paper to ascertain the acid or alkaline condition of secretions or excretions, and with tests for detecting albumen in the urine or in effused fluids.

There are one or two points to be attended to in the use of these auxiliaries to investigation. One is, that you should so use them as to be able to dispense with them; for very often the opportunity will not be afforded you, and you should use them so that you may the more accurately discriminate the rational signs of disease. Another point is, that you should never make a merely pedantic use of them; that is to say, a use simply for display, and intended to impress your patient with the idea that you are uncommonly acute and knowing. Such a practice will impair your love of truth, for it is an acted lie; and in the long run will impair rather than advance your reputation. It is possible that very great talents for "humbug" will carry you through pretty well, but the same talents used more honourably would do you better service I think.

And now we come to an important question: In what way should you use your unaided senses, or when should you use your aids? Although I wish you at present rather to turn your attention to pathological phenomena than to therapeutic indications, you must bear in mind that the great object of all your labours, studies, and investigations, is the cure or relief of disease in man. Never lose sight of this point. Let it be your pole-star; make every thing you do point to it; steer the whole of your course by it, whether you be student or practitioner. You can and ought to take up special subjects of investigation, but have a variety. If you do not this your mind will suffer as the bodies and limbs of men often do who follow special employments. You will be mentally deformed; your mental symmetry will be imperfect. To be thought crotchetty is the least evil that will result from such a course; you will experience a loss of mental power; you will be weak when you enter the lists to engage in the melée of mind, and when you ought to be strong.

Now there are three or four methods of investigating or observing a case presented to you for treatment. One is, to examine your patient as to his medical biography. You inquire into his birth, rank, and employment; the health of his parents and relatives, but especially with reference to hereditary diseases and temperament; you note the diseases of his infancy, his occupations hitherto, his bodily constitution, the diseases to which he is liable, his habits of life. his idiosyncrasies, the treatment he has hitherto adopted, the opinions of his previous medical advisers, if he have had any. Then you pass on to the history and causes of the existing disease, the operation of the remedies already used, &c. This part of the investigation is technically termed the anamnesis, a Greek word, derived from anamimnisko,—to recal to mind. The anamnesis being completed, you then proceed to use your senses, and investigate the status præsens, or present state, of the patient. In this part of the inquiry the various organs are methodically investigated with reference to their structural or functional condition. This completed you have collected a number of observations, and you have next to generalise them, and see in what points the generalisation resembles or is different from analogous or apparently similar generalisation in systems of medicine. This implies a previous knowledge of the distinguishing or diagnostic characters of these generalisations, or in other words of nosography. Having ascertained in what class of diseases it is not, you limit the sphere of comparison until you establish your diagnosis, or determine what disease it is. This is the synthetical method.

There is another method, the analytical, in which you *begin* with the *status præsens*, and refer only to such points in the anamnesis as bears on the present state; this is better than the other. There is another, in which you let the patient himself describe his status præsens, and his anamnesis, and you only make such inquiries and explorations as are necessary to perfect your knowledge of the case. This method I prefer. It is the quickest method, and saves your time; it is the most agreeable to your patient, because it gives him an opportunity of pouring forth his complaints into the ear of a willing and (I hope) sympathising listener; and it is the most effective, because the most salient points of the case are placed before your undistracted attention. Further, in my opinion it is the most natural method.

Well now, suppose a poor sick man comes to you, or sends to you, for your advice. First, get him to tell his story—to relate his anamnesis and status præsens. If you ask him what he complains of, he will perhaps tell you that he "does'nt know, but his neighbour" (or his wife, or his mother, as the case may be) "says it's palpitation at the heart." Now, the answer is not the sort of one you want; nevertheless you have a cue given you—the leading symptom is palpitation of the heart —a symptom indicative of increased or irregular cardiac action, and your eye would note his complexion, respiration, &c. The next step would be to ask for an account of the way in which it began, under what circumstances, how long ago, &c. To the poor here I generally use one phrase only; it is obsolete among the educated classes of society, but the less educated people, especially in the rural districts, attach a very definite meaning to it. If you say to your poor man, "Well now, will you be so good as to tell me how you have been *handled*, he will (nine times in ten) tell you the history of his case—give you both his anamnesis and his status præsens—exactly what you wanted. The verb "to handle," as used by him, does not mean to take a thing into the hand, or to manipulate, but is synonymous with the German verb "handeln"—he thinks you wish to know how he has been *treated by* his complaint. There are many such Anglo-Saxon words in all the Yorkshire dialects, and you should know their use. You of course listen attentivly to his history, only interrupting him when he makes some statement that implies theory or anatomical knowledge on his part. He may say, for example, that he had, or has had, pain in his kidney; and then you would do well to request him to point out the exact spot, or you may pleasantly ask him where his kidneys are. Or possibly he may say he is troubled with the gravel? he may mean that he has passed urinary sand, or small calculi; he more probably does mean that he has pain or difficulty in passing urine. These may seem trifles, but they are not so; you must seek for *accurate* information, and surely an accurate knowledge of the meaning of terms is essential to this; your motto must be the wise dictum of Hippocrates—*Nihil temerè credendum, nihil negligendum.* I could give you too, a quotation from Bacon as to the importance of little and humble observations, but that I leave to your own discovery, trusting you will take my advice, and read his works.

Well, then, while the patient is using his tongue, you must use your eyes as well as your ears. While he is speaking you have a good opportunity of observing the play of his features, the expression of his eyes and mouth, his complexion, his condition (to use a jockey's phrase). To do this effectually always set your patient in a good light, or at least as good a light as you can get. You will sometimes find blinds down and curtains drawn; these often give an unnatural hue to the face. Say at once to the person in attendance that a little more light is requisite. Your patient will probably have his face turned from the light; he has done this from habit, or instinctively, for nature acts very often when we think not; you will beg of him to turn round. or over, for a moment, or get his nurse to assist him. Never do this yourself, by the by, unless absolutely necessary. But be sure to have always a thorough look at your patient's face, for innumerable signs of disease are written thereon, and many causes of diseases leave their traces there. It is a wonderful book to read in is the human face! the infinite variety of change which its constituents undergo are remarkable. The feelings, propensities, and passions, and their compounds, have each their peculiar combinations of muscular and vascular action, and these changes are induced by some wondrous machinery within the cerebro-spinal axis. Quick as thought the eyes are suffused by grief, or sparkle with joy; the lips are white with rage, or the cheeks red with shame. Then how wonderful the muscular combination! Perhaps those of the seven muscles of the eye are the most surprising of all in their varied expression. Now it is a remarkable circumstance that the viscera have apparently an incident excitor action on the encephalon in exciting those emotions and passions which act upon them. One would think there was a mutual play of agency and re-agency between them. Anger disorders the stomach and liver; diseases of the stomach and liver predispose to anger. The heart is said to be broken by sorrow, asthenic diseases of the heart predispose to melancholy, &c. Now whether this be a general law or not is doubtful, but it is certain that the expression of countenance is a very good index to the seat of the disease. You have the eye as the exponent of the nervous system; the stare, or the unmeaning glance of insanity, the downcast furtive glance observed in tabes dorsalis of young men; the knitting of the brows in long-continued headache; the anxious look of the hypochondriac. In hepatic disease you have also a somewhat similar expression, but there is irritability too, and the colour of the complexion gives it a different meaning; in cardiac diseases this is also often observed, but here again there is a difference induced by modifying circumstances. The anxious pallid face in reno-cardiac disease differs from both the preceding in its tint; the cellular tissue of the under eyelid is also often œdematous, the cheeks rather bloated, the lips bluish. In diseases affecting the abdominal serous membrane you have extreme anxiety depicted on the countenance, with the knees up, and the head turned to one side, usually from the light, but restlessly moving—it is almost pathognomonic. A peculiar drawing of the lips and nose is always seen in chronic peritoneal disease. The facies Hippocratica is matter of popular knowledge. The colour of the skin of the face (the complexion) will tell you much: I have already noticed one or two points. There is no mistaking the chlorotic complexion; the bilious complexion is less certain, and so is that of the cancerous diathesis, but both are usually well marked. The muddy tint of typhus, with a feverish redness of the cheeks, is widely different from the red and white of phthisis. The pearly bright eye and transparent skin of the scrofulous is noticeable. You must mark well the ruddy complexion, and its varieties and complications. It indicates the sanguine temperament, the arthritic diathesis, a tendency to gout or rheumatism, to atheromatous deposit between the arterial tunics, to aneurisms, diseases of the heart, apoplexy, neuralgic affections, and, in females, peculiar forms of hysteria.

While the patient is telling you how he is "handled," you will mark his attitudes, and notice his voice, and the length of time he can speak without drawing breath. That is a good pnoiometer. Another pnoiometer of this kind is to get the patient to count when you are examining him stethoscopically, and wish to know if there be pectoriloquy. You may leisurely count from fifteen to twenty in ten seconds with perfect ease, even after dinner; the less number he can count the less probably is the capacity of the chest. And so in speaking: the more frequent the interruption in his sentences, when speaking, to take breath, the less air is contained in the lungs. By measuring these intervals your watch will be a pnoiometer. The varieties in the mode of breathing are very instructive. There is the respiratio-cephalica, with its three, four, or five ordinary inspirations, and then a full and deep inspiration. This is a *malum signum* in cerebral disease. The nostrils are sometimes seen to expand, particularly in children with pneumonia. Sometimes an old man with emphysema, or dilatation of the bronchi, may be seen holding the back of a chair, and raising his shoulders. The voice may indicate, firstly, disease of the nasal cavities, larynx, and pharynx; secondly, disease of the lungs—large cavities, the voice itself being cavernous; thirdly, general debility; fourthly, loss of sexual power, &c The vibrations it excites in the parietes of the thorax differ, but that belongs to exploration of the thorax.

I only mention the preceding as examples from the nosological spelling-book that you must study: but I must not forget the tongue. After you have heard your patient's history sufficiently long, and made your inspection (and really with practice the latter may be done in two or three minutes—as quickly as you could read a few lines) you proceed to your exploration. The first thing examined should be the tongue. Patients are apt to become garrulous when they have got hold of a good and sympathising listener, and then they talk on without giving any information whatever. You cannot tell them to hold their tongue, but better than this, you can request them to put it out, and so it serves a double purpose. Now a glance at the tongue will add considerably to the knowledge already acquired. A tremulous brown tongue is usual in typhus, and you will find, when a typhous patient raises his hand that you may feel his pulse, it (the hand) is tremulous too; in a higher degree this becomes subsultus. A creamy fur is seen in the first stage of gastro-enteric fever; a creamy coat, dotted with red points, is usual in acute irritation or inflammation of the buccal or pharyngeal mucous membrane; in ptyalism, for example, or in angina tonsillaris. A dry scabrous tongue is very common in diseases of the lumbo-pelvic region, but more particularly of the kidneys, colon, or cæcum. You have this kind of tongue, also, in chronic congestion or inflammation of the pharynx and adjoining structures, with congestion of the rectum, only it is somewhat moister, and there are several enlarged papillæ projecting from the scabrous surface.

With regard to the pulse, I need only say that you must make yourself most thoroughly acquainted with it in both health and disease, and with all its relations, but especially with those having reference to the heart. The pulse will tell you much; but you must be on your guard, and take care that you judge it rightly. There are many cautions to be observed, which I will tell you in their proper place.

I need not enter further into details, but I would here impress upon you a general principle to be observed in making clinical observations, and that is, that the innumerable symptoms of disease are of no value if taken singly. They must all be combined: just as vocal sounds are represented by letters, and letters combined into words represent ideas, so it is with symptoms. They correspond singly to elementary sounds, and you have first to determine their alphabetic value, and then their verbal value; first, to make out the letters or combined symptoms, and then the words, or their nosological signification. And this is why I called clinical observation by the student a conning of the nosological spelling-book.

Authors in general, who have written on semeiology, have written very learned and elaborate, but very useless books, because they have not concentrated their knowledge in an exposition of the multitudinous combinations of symptoms. An author, for example, tells you that a white tongue is present in such and such diseases, enumerating thirty! but of what use could that enumeration be to you? I doubt much whether these combinations ever can be expressed in ordinary language; you know how difficult it is to convey anything like a correct idea of the person of an individual to one who has not seen him; the person so described must be seen. It is equally necessary that you see diseases, and study their physiognomy for yourself, if you would understand them. Perhaps a numerous series of Daguerreotype portraits might be made available in constructing a suitable language for the expression of these combinations, but the labour would be immense.

But to return from this digression to our method of investigation. In a large number of cases you need not go further in your clinical observations, provided you can use your eyes and ears and touch, quickly and accurately, and have made such exploration, and asked such appropriate questions as are necessary to complete your diagnosis. The fact is, by a continual training of your perceptive powers—your intellect as well as your senses—you will be enabled to decide upon the case with great rapidity and precision; you will read the nosological writing at a glance, and you might save your patient the trouble of detailing his anamnesis and status præsens by detailing them yourself. But there is another duty incumbent upon you, and that is to observe so that your observations may not only subserve your immediate purpose, but may also advance the art and science of medicine. To attain this object you must adopt the numerical method; now this method allows of no superficial examinations, general expressions of facts, or mental generalizations. You may be quite sure of the nature of the case, but if you record the facts you must state them so accurately and precisely that they can be generalized numerically. You cannot say, for example, generally, that the respiration was quickened, but you must state the number of respirations in a minute. You cannot say, with propriety, that the pulse was *about* 100, but you must count it, watch in hand. It it intermits, you should state even the intermissions numerically. If there be pain in the side, state which side and which region. If there be paralysis, state the limb affected by it, or otherwise define its exact extent, and do not be content with a superficial notion. Nay, if there be an ulcer on the surface, designate its exact locality. Be also exact in your dates, and especially careful to note nothing but what is true. In all observations intended to be recorded after the numerical method, your aids to the senses and to the intellect must come into play. Remember Bacon's sentiment, "*instrumentis et auxiliis res superficiter*," and have your meters, your specula, your lenses, and your stethoscope, all ready for use. Thus you will secure philosophical accuracy of observation; you will secure materials from which safe generalizations may be made by others as well as by yourself, and the exponent of each generalization will form a general law from which you may infer rules of art and derive guides to further investigation.

Having thus ascertained the nature of the disease under notice, you have to decide on the treatment. This implies rigorously a knowledge of the causes of the diseased state, and a knowldge of therapeutics. Now a knowledge of the causes can only be arrived at by the same process as that which led you to a knowledge of the disease. You have to observe, investigate, and generalize. The experienced eye will often detect the causes in the characteristics of the patient. In delirium tremens, or delirium *a potu*, your diagnosis should be a causal diagnosis—that is to say, the signs of indulgence in alcoholic stimulants existing on the person of the patient, would lead you to the proper you should exercise your eye in discriminat- diagnosis, and, indicating the cause, would indicate the treatment. The influence of occupations on the development of disease is great; ing them. So also with peculiar habits; so also with localities, &c. You may know with tolerable accuracy, by the sense of smell only, whether a poor child brought to you has come from a home with one room, or with more than one.

After you have prescribed the treatment you think suitable to the case, you will have to see the patient again. The method of investigation is as before, but the phenomena are more complex. The influence of medicinal agents now complicate the morbid phenomena. The moral condition of your patient, too, may now be a powerful disturbing agent. You may not have gained his confidence, and he therefore is less explicit in declaring his symptoms. Perhaps he has not even taken the medicine you have ordered; or the medicine taken has had its due action disturbed by moral causes.

Always, at the second visit, be a careful listener to the anamnesis; you may then be saved severe mortification. Always be careful how you draw conclusions as to the action of remedies or remedial plans, even if they have been carefully projected. There is nothing so fallacious as the *post hoc ergo propter hoc* inference, except one other, and that is when the efficacy of a remedy is inferred which a patient has never taken. The wisest plan is to be extremely wary in all cases how you give your opinion, and when you are obliged to give your opinion, remember what I said a short time ago—*nihil temerè credendum*. An opinion is a generalization — an inference from certain facts and observations; and you cannot be too careful as to the accuracy of your facts. If you cannot be sure of their accuracy, give no opinion, and state your reason frankly. You will advance your reputation thereby; you will get a character for prudence, cautiousness, and love of truth; and there are no qualities people esteem so much in the character of a practitioner as these.

I have not entered deeply into my subject, because I hope to have many opportunities of communicating with you, and because I think this slight sketch of the value and uses, and method for conducting clinical observation, would interest you more than a methodical and formal disquisition. As it is, I fear you will be somewhat appalled by the difficulties of the subject, and you may be inclined to abandon your nosological spelling-book, as a boy at school would abandon his Greek Grammar. I will not conceal from you the truth that you must toil perseveringly, if you would make progress in your profession; but I must also assure you, that if you do perseveringly labour, you will infallibly succeed. Perseverance is genius, and genius of a high order, and genius within your reach. But you will find only the first steps to be wearisome. These conquered, and a stock of sound physiological knowledge laid in, you will attain to high happiness from your professional pursuits. Some people seeking only sensual gratification, make a toil of a pleasure; you, with deeper knowledge of yourselves, will make a pleasure of a toil. But this pleasant result can only be reached through a thorough novitiate.

> "Qui studet optatam cursu contingere metam,
> Multa tulit fecit que puer, sudavit, et alsit."

I think I can promise you that you will not want assistance in your training for the race of professional life, nor opportunities for mental gymnastics. You have access to a good musem, and a good book to read in —the medical and surgical practice of the hospital; and the clinical lectures delivered there will be, I have no doubt, very instructive comments on the more difficult or important passages in that book. Patients in a hospital are removed from many hindrances to accurate observation and treatment, and this is an advantage; but in dispensary practice you may see these hindrances in operation, and may learn how to combat them—and this is an advantage too. Indeed, public and private hygiene form so important a part of medical science, that it is worthy your special study, and you can have no better opportunities of studying it than in dispensary practice. A connexion with the Health of Towns Commission has introduced me to an intimate acquaintance with every locality in York, and I shall place any knowledge I have at your disposal, introducing it, from time to time, in such demonstrative lectures as it will properly come into. I think, if there ought not to be a chair of hygiene in every school, at least special attention should be given to it in clinical lectures; and this we will do.

Original Communications.

CASES OF
STRANGULATED HERNIA,
WITH SOME REMARKS PRINCIPALLY INTENDED TO SHOW THE NECESSITY OF AN EARLY RESORT TO THE OPERATION.

By John C. Warren, M.D.
Professor of Anatomy and Operative Surgery in Harvard University, Boston.*

[Continued from p. 20.]

Case IV. — *Strangulated Inguinal Hernia: attempt at reduction by posture and copious bleeding: operation in six hours after strangulation: rapid recovery.*

This patient, aged 24 years, belonging to the town of Nashua, N. H., was brought into the Massachusetts General Hospital on the 9th of June, 1843, during the surgical visit. He was affected with strangulated inguinal hernia, and was suffering very severe pain.

It appeared that he had had hernia for some years, and was in the habit of wearing a truss; that the hernia had escaped from under the truss, without any remarkable effort, on this morning at five o'clock. He had no pain or other bad symptoms at first; but applying to a medical practitioner, violent pressure, as he said, was made upon the tumor, with the intention of reducing it.

In consequence of this pressure, the part had become excessively painful, and so tender as scarcely to permit it to be touched. The tumor was about four inches in length, and two inches and a half in diameter: the smoothness of its surface indicated that the contents were intestine. The skin was red. The entrance of the tumor into the abdominal ring could be distinguished, and its passage above the ring through the abdominal canal.

Dr. Townsend, who had charge of the surgical patients in the hospital at this time, and Dr. Hayward, being present, the following measures were agreed to and executed: to sit the patient up in a chair and bleed until he fainted;

---

* Communicated by the Author.

during the fainting, to attempt reduction by raising the heels over the shoulders of an attendant, and making moderate pressure on the tumor.

He was accordingly bled twenty-four ounces; then becoming faint, the feet were taken on the back of an assistant, and pressure was made in the manner proposed. The tension of the recti muscles appeared to operate unfavourably by producing compression on the abdominal viscera; this was partially obviated by letting him down till the pelvis rested on the bed. Pressure on the tumor, attempts to insinuate the hernia through the ring, pressure on the lower part of the abdomen directed from below upwards, were now practised with the view of returning the hernial contents. The efforts made in this way having been unsuccesful, the patient was elevated, placed on a chair, and bled from the arm till he again became faint, when the manœuvres above detailed were repeated, but the tumor did not yield in the slightest degree.

At this stage it was determined, on consultation, that instead of going through the common routine of applications, an operation should be immediately resorted to. The patient was therefore removed to the operating theatre; the part concerned was shaved, he was then placed on the table, and the operation performed in the manner to be described.

A small puncture was made with a knife, and the probe-pointed bistoury was introduced, in the hope of insinuating it through the fascia into the abdominal ring, and dilating the ring by a subcutaneous cut. The excessive sensibility of the part increased the ordinary difficulty of this mode of operating, so that it was relinquished.

An incision was then made about three inches long, beginning an inch above the abdominal ring, and ending two inches below it. The dissection was continued the whole length of the wound through the cellular texture, fascia and cremaster, till the covering of the sac appeared thin. The movements of the patient from excessive sensibility rendered it impracticable to dilate the stricture without opening the sac; wherefore a portion of this covering being raised by the forceps, it was cautiously divided by the point of a knife, and a minute stream of water issuing from it, indicated the opening of the sac. A further dilatation of the opening being then made, about two tablespoonfuls of water were discharged.

The finger was next introduced through this orifice in the sac, which had been enlarged to about two inches, in search of the stricture. This was so blocked up by intestine as not to be readily discriminated; but after two or three minutes' delay the extremity of the little finger was insinuated into the stricture, which was obviously in the tendon of the external oblique muscle at the abdominal ring. The probe-pointed bistoury was now introduced with its flat surface on the finger, and then having its edge turned forwards, it was moved in a direction upwards by the finger which was in the wound, and thus the stricture was safely dilated, and the bistoury was then laid aside.

The intestine which filled the sac was of a deep purple colour, though the strangulation had existed only six hours. This part being gently drawn down, a portion of sound intestine, which lay above the stricture, was pulled out of it; then the effort was made to return the intestine by pushing in the internal layer, or that towards the median line. This not succeeding, the effort was made on the outer fold of intestine, which, lying behind the other, passed in without difficulty. The hernia was thus reduced, and the patient immediately relieved from his state of suffering.

The scrotal artery and one of its branches required ligature. The edges of the wound were brought together by a number of fine sutures; a cold water compress was applied upon it, and the patient was directed, whenever he had occasion to move, to place his right hand on the wound. He was then conveyed to bed, and three hours after had an enema, which operated favourably.

He passed the night after the operation quietly, and the next morning was in a cheerful and natural state: the pulse was healthy, the skin cool, the tongue had a slight fur. His appetite was good; there was no pain or tenderness in the abdomen. A purgative of senna was employed, which operated freely. His recovery was rapid, and in a few days he took his departure from the hospital.

Remarks.—This case particularly shows the advantage of an early resort to the operation. The great pain and tenderness in the hernia which this patient experienced, and the dark colour of the intestine when the sac was opened, make it probable that the processes of inflammation would have proceeded rapidly, and terminated in gangrene at an early period. The pain of the operation was not greater than, if so great as, that from the pressure employed in taxis, and the immediate effect of the wound, the exposure and handling of the intestine, were productive of very slight consequences.

Case V.—*Crural hernia: operation in thirty-two hours after strangulation: effort at the permanent cure of the rupture: effects of confinement in the horizontal posture.*

A brickmaker, about 35 years old, was brought into the Massachusetts General Hospital on the 21st of April, 1844. His brother, who had undergone ligature of the subclavian artery, was at the same time a patient in the hospital. He is a tall, rather spare man; he has been subject to hernia fourteen years, and retained it by a truss.

On the day previous, being at work at his business, the hernia escaped from under the truss, and he felt a severe pain in the bowels. Soon after he was seized with vomiting, and the pain becoming very acute, in the following night he sent for Dr. Hooker, of East Cambridge, where he resided. Dr H. tried taxis without success, then bled him, give him an injection, and after having continued his efforts for a number of hours, he sent him to the hospital. He was there put into a warm bath, cold applications were made, and moderate pressure was tried once more. No diminution of the tumor taking place, the operation was agreed upon in consultation with my colleagues, Drs. Hayward and Townsend, and resorted to at 5 o'clock, P M about thirty-two hours after strangulation, and eight after he entered the hospital.

The parts having been cleared of hair, and the patient placed on the table with his legs hanging down, and his head supported in an easy posture, the tumor was once more carefully examined previous to operating. It lay in the right groin, was about two inches in diameter, and occupied the space directly over Poupart's ligament, one half of the tumor being above, and one half below this ligament. The skin was then drawn up in a double fold; its division made a wound about two inches and a half long, and uncovered the anterior face of the hernia; this was invested, as usual in crural hernia, by a quantity of fat. I then drew the tumor down from the face of the external oblique muscle, and endeavoured to expose the fascia investing the neck of the sac; but the tumor could not be sufficiently displaced to allow this. I therefore dissected the fat from the sac, found a little soft rising, indicating a collection of water at that point, punctured this, introduced a director, and opened the sac to the edge of Poupart's ligament; the fascia being, as usual in crural hernia, very thin. A mass of omentum was exposed, and this being raised, a fold of dark-coloured intestine was seen lying under it: the handling of these parts gave no pain to the patient.

I then attempted to insinuate the little finger of the left hand under the edge of Poupart's ligament, but could only find room for the nail. On this a probe-pointed bistoury was placed, and by a small incision the end of the finger could be passed far enough to feel the semi-lunar insertion of the external oblique muscle into the os pubis. This being divided by an incision towards the median line, sufficiently to allow the finger to pass, the knife was withdrawn, and the intestine readily turned into the cavity of the abdomen. The omentum was then pushed up, but a small process of it immediately came back. By passing the finger into the neck of the sac, I had ascertained that this portion of omentum had contracted adhesion to that part; this was considered fortunate, as it might serve to aid in closing the hernial aperture. The examination of the omentum gave an opportunity of noticing the obturator artery; I found it passing transversely from the epigastric to the obturator foramen, in a line, as nearly as I could judge, an inch below the crural aperture.

In dressing the wound, I wished, if possible, to do something towards the prevention of a return of the rupture. For this purpose, instead of sewing the edges of the skin together, I included in the suture an inch of integument on each side of the wound directly over the crural ring, so as to shorten the skin at that point two inches. Large quantities of soft lint were laid on the wound, and this was supported by a bandage; he was directed, whenever he moved or had an evacuation, to place his hand over the wound.

The patient was at once relieved from pain. In two hours he had an injection, which operated favourably. The next morning he took a small dose of senna, which purged him moderately; he was free from any suffering, but complained of hunger, for which he was allowed gruel and light drinks.

On the fourth day after the operation, the wound having nearly united by the first intention, there was a thickening of the celluar membrane around the incision, with a slight erythematous appearance of the skin. For this he was ordered a laxative, and the application of cucumber ointment to the part; under these measures, in the course of thirty-six hours, the erythema disappeared. He convalesced rapidly, and on the fifteenth day was so well, that he asked permission to go home, but was induced to remain a few days longer in the hospital.

The patient had been restricted to the horizontal position, without having been once raised after the operation, till May 8th, seventeen days, in order to give the hernial aperture time to close, by means of the inflammation produced by the suture and the wound of the operation. At this time, after having been exposed to an open window near his bed, he was seized with chills followed by reaction, some soreness of the throat, and a very dry tongue. The appetite of course failed, but there was no great disposition for liquids; the respiration was without any labour; he had a slight propensity to cough. Percussion on the forepart of the chest presented nothing extraordinary; the respiratory murmur was not distinctly audible on the left side. These symptoms were thought to be of a grave character, and arising from congestive inflammation, produced by the combined action of cold on the skin and long confinement in the horizontal posture. It was not thought expedient to bleed him, but he was largely blistered on the chest, the bowels were evacuated, and hot applications made to the extremities.

After the lapse of a day or two, the severity of the symptoms having passed off, he was ordered to be raised in bed for a short time daily, and the back, being then accessible, was examined; the sound on percussion was dull on the left; crepitous rattle was heard at the upper part of the lung; at the lower part there was no audible murmur. The cough had become rare, but was attended with the expectoration of a very dark coloured mucus.

He continued in this condition, with very little variation, till the 18th of May, when it was evident that his disease had ameliorated, and his state was no longer one of danger. Directions were given to have his position altered occasionally, from the back to the side. From this time he rapidly convalesced, and in a few days he was discharged from the hospital.

Remarks.—In this case the patient was immediately relieved, by the operation, from very great suffering, and had afterwards no symptom, worthy of notice, which was dependent on it. The existence of erythema in the hospital at the time slightly retarded his recovery; but after this had passed off, a formidable affection, not immediately connected with the operation, produced a more serious impression on him.

It is well known, that when patients are closely confined to the bed by accidents connected with wounds, the pulmonary circulation is apt to become languid, and eventually to result in congestive inflammation. The signs of this affection are in many of these cases so indistinct, that the disease often passes unnoticed, or is confounded with the preceding affection. A singular coincidence presented itself in the occurrence of a similar disease, congestive inflammation of the lungs, in the brother of this patient, who had been operated on for ligature of the subclavian artery a short time before. The liability to these attacks should make us careful not to enforce a total immobility of the body, where it can be possibly be avoided.*

---

* The following case will illustrate more strongly the dangers of too long confinement in the horizontal posture.

Some years ago, I was called, by an eminent physician in this vicinity, to see a patient of his, It is a little remarkable, that this is the only instance in which I have had to do the operation for strangulated crural hernia in the male subject, while I have done it a great number of times for females. By some late French authorities, it would appear that crural hernia was as common in the male as scrotal; my own observation would lead to a very different result. In the course of my life, I have seen but a few instances of the existence of crural hernia in the male, while I have met with a very great number of scrotal.

[To be continued.]

TWIN CASE OF DIFFICULT LABOUR; IMPACTION OF THE HEADS.

By E. W. Eton, Esq.
Resident Surgeon, Windsor Royal Dispensary.

Mrs. M., primipara, æt. 26, of a delicate habit, and living in a crowded and unhealthy court, at her full time, was reported as taken in labour in the evening of May 14th.

My assistance was called for by the midwife, about noon on the next day, in consequence of the pains having been ineffective, though extraordinarily severe for ten hours past. I found the os uteri tolerably dilated, hip and elbow presenting, the latter uppermost, and to the sacrum. As the pains had still some power—as the soft parts required further relaxation, and the presentation being within the powers of nature to change—I considered tha opportunity should be given her.

My next visit, at 2 P.M., found the pains had been useful in dilating the parts, but their force had acted upon the upper instead of the lower extremity, the bent arm being now fully in the vagina. The patient was also much worse, with restless anxiety, flagging pulse and pains, and a general aspect indicative of coming exhaustion. The course was obvious; nothing was to be gained by further delay, and every thing to be lost by it.

It was ascertained that the bowels and bladder had been lately relieved. The abdomen was observed to be equable, and of ordinary size. Although the membranes required to be ruptured, I found but little of the liquor amnii. The feet were soon seized, as they lay low and forward; they were turned towards the sacrum. A dose of ergot was then given for the first time. After the thighs had passed, the delivery became slow and increasingly difficult; the abdomen suffered great compression in passing, the thorax still more; the difficulty became greater with the further progress of the body; the arms were extracted with much trouble, and it then being practicable an examination was made. I found the vertex of a full-sized head presenting immediately over the breast, in the position where there should have been a chin: the anterior base of the neck could be traced in close and compressed contact with the presenting head, the latter firmly impacted in the pelvic cavity.

The deficiency of the liquor amnii at once occurred to my mind, and a hand on the abdomen confirmed the impression that the case was one of

---

a female, who had been for eight days suffering from a strangulated crural hernia. She was cold and almost pulseless; the skin over the hernia was dark coloured. I made an incision through the tumor into the sac, and opened it for about two inches. The intestine was found to be sloughing. The patient was, of course, apparently in a hopeless state. Cordials were given her, and, contrary to expectation, she revived; the gangrenous parts separated; the fæces discharged themselves from the wound. The parts put on a healthy appearance, and in about four weeks after the operation, by aid of pressure, the fæces began to assume their natural course.

From this time I saw no more of the patient; but about three weeks afterwards, or in seven weeks from the time of the operation, I was requested to examine her body. It appeared that she had improved constantly, but had never been allowed to rise in bed, from an apprehension that the intestines would make their way through the wound. On the night previous to her death, awaking suddenly, instead of drinking in the horizontal posture, as she had been accustomed to do, from the impulse of the moment she rose in bed quickly, drunk the fluid offered her, and then fell back in a state of syncope, from which she never recovered.

I carefully examined the body, particularly the brain, and could discover no physical cause for her death, excepting perhaps that the brain was unusually free from blood. The parts concerned in the hernia were preserved, and also a drawing made of them. They beautifully illustrate the process by which nature unites into one the two orifices of a sphacelated intestine, thereby restoring the continuity of the canal.

Had this patient been gradually raised in bed, soon after the ends of the intestine had formed, as they do in such cases, a union with the orifice of the hernial sac, she would, it is to be presumed, have escaped the fatal syncope caused by a sudden change from the horizontal to the vertical position. after having remained so long time in the former state, and perhaps have ultimately recovered.

twins, in which both ova had been ruptured, and the head of the second child had descended into the pelvis, between the head and body of the one so nearly born. The new circumstances which obstructed delivery rendered its necessity only more urgent, and to the physical impediment was added the danger of subsequent collapse, never to be lost sight of, with plural births. Though the pains had some force, they were not to be relied on as any great proof of constitutional resources, resulting as they did immediately from stimulus; but even attributing better powers to the patient than she had exhibited, supposing so large an amount of mechanical obstruction could be overcome by natural or assisted efforts, the resistance of the outer parts in a first case was to be looked for, in this increased by the extended chest and shoulders lying within the orifice, and tending necessarily to throw the presentation the wrong way, — viz. against the rectum; whilst the efforts of the uterus would be at the same time forcing the other head against the bladder: if life were preserved, deplorable injury could only be anticipated.

To leave the issue, then, to the possibility of nature's effecting the delivery in the state of my patient, was out of the question. Three modes of relief offered: 1. to push the head back; 2. to open it; 3. to truncate the extruded body. The first was impracticable; the second, added to the sacrifice of the only child for which there was a hope of life, the conclusive objection that its purpose would remain unaccomplished, as the head, even diminished, would still be an awkward and dangerous obstacle in the way. The third combined the greatest safety for the mother, and a chance of existence for the preserved surviving child.

The separation was made about the seventh cervical vertebra, the finger guarding the knife; the neck, which was left smooth, was then pushed up; it passed easily, and a perceptible fall of the presenting head resulted. The forceps were then applied laterally, and delivery effected at 3 o'clock, P.M. A non-contractile state of uterus required the cold dash, and it was some time before the viscus could be safely cleansed of its contents. Brandy and ergot were freely administered, and no great amount of hæmorrhage took place. My attention divided between mother and child failed in restoring animation to the latter, though long and anxiously continued. Children were both large for twins, each measuring 17 inches.

Cases of the above description are of exceedingly rare occurrence, as the investment of each fœtus in its membranes, with the contained fluid, forming an oval elastic body, tends naturally to prevent such misfortune. If the children are small, no difficulty will be presented; or if the pelvis be roomy, the powers good, and the external parts easily dilatable, there may be no occasion for interference;—the progress of labour would probably be of this kind: the neck and shoulders of the first child being kept well forward, the head of the second would descend along the fixed obstacle, the body of the first, whose head would be last expelled, and life probably lost. The portion of the cavity of the pelvis occupied by the mere neck is but small; the real difficulties are at brim and outlet, where the impediment of head in the one case, and body in the other, would be severely felt.

Here the heads were full-sized, and the proportion with the pelvis such that, in applying the forceps, there was as much difficulty as usual in cases requiring them. As the condition which followed exhibits the shock and amount of injury the patient had received, I subjoin the following notes:—

Vespere.—Of course low, and in pain.

Arrow Root. A draught of the Acetate, with an excess of Ammonia, and an opiate at bed-time.

May 15th.—Catheter required morning and night. Urine plentiful. Skin moist. Pulse soft; is low, but without much pain.

16th.—Slight fever; increased pain in lower abdomen.

Ol. Ricini statim. Haustus Febrifugus, 4ta hora capiendus. Fotus calid. hypogastrio applicand.

Reaction from injury of pelvic viscera coinciding with the constitutional excitement attending the milk secretion.

17th.—Rigors in the night. Severe darting pains through the hypogastrium, with tension and extreme tenderness. Lochial discharge ceased urine drawn by catheter scanty, high-coloured, and mixed with pus. Pulse 120, hard, but jerking; white furred tongue.

℞ Calomelanos, gr. ij. Opii, gr. ss. Camphoræ, gr. j. ft. pil. j. 4ta horâ c. haustâ febrifugo cap. Contineantur fotus.

Vespere. — Catheterism. Urine as before. Inflammation of the bladder, and probably of the pelvic peritoneum and uterus, but with too low a state of general system to bear even topical depletion.

18th. *Mane.*—Not much difference.

Perstet.

Vespere.—Tenderness somewhat less. Pulse softer. Bowels open. Reappearance, to a slight extent, of the lochia. Much depression.

Arrow Root. Omit the Calomel.

℞ Pil. Saponis c. Opii, gr. viij. in pil. ij. horâ somni.

19th.—Much less pain and tenderness, but exhibits great prostration; an anxious countenance; has had no sleep; pulse frequent and wavering; tongue brown, with red edges; is purged.

℞ Pil. Opii, gr. j. statim; Mist. Cretæ Co. ʒi; Conf. Aromaticæ, ℈j. Tr. Opii ♏xv. ft. haustus quartâ etiamque post quasque sedes liquidas. Port wine in her Arrow-root, Beef-tea ad libitum. Catheterism as before; Urine more abundant, purulent. ℞ Pil. Saponis c. Opio, gr. x. ft. Pil. ij. h. s.

20th.—No sleep; pulse 130, and weak; tongue with very red edges; countenance expressive of great debility; has frequent faintings. The nurse states she can hardly "keep life in her." Perspiration profuse; diarrhœa rather lessened; still tenderness of the hypochondrium, beyond what is referable to occasional fulness of the bladder.

Enemata Amyli; Tr. Opii. ʒss. in singulis. Haust. Aromat. adde Sp. Æth. S. Co. ♏xx., augend. dos. Tr. Opii ad ♏xx. ft. perstet in aliis.

If the perspiration is not either a consequence of pus absorbed into the system from the lining membrane or the neighbourhood of the bladder, or a mere feature of the general purperal debility, it is from the opium. This means, however, is the only one which meets the three prominent indications—to allay irritation, support the vital powers, and check the diarrhœa. By accident the bladder was not emptied this evening.

21st.—At 2 A.M., was called to draw off the water. Found her improved; purging stopped; urine purulent. 10 A.M., has slept; scarcely any pain or tenderness; pulse 120, but firmer; tongue paler; head quite clear; skin relaxed; countenance less anxious.

℞ Quinæ Disulph. gr. i., Sp. Æth. S. C. ♏xx., Acid S. Dil. Tr. Opii. aa ♏xv., Infusi Rosæ ut fiat haustus quartâ horâ sumendus. Rept. Pil. Opii, h. s. Arrow-root with Port wine, Beef-tea as before.

22nd.—Bad night, with frequent faintings; much debility, but on the whole improvement of aspect; pulse 110.

Rept. Haust. Quin. c. Opio; in addition, two glasses of Port wine; and chicken-broth.

℞ Morph. Acet. gr. ¼, partem, Quin. Sulph. gr. iij., Camphoræ, gr. iss., Ext. Hyosc. q. s. ft. pil. ij. h. s.

23rd.—Has slept tolerably; pulse 98; countenance improved; bowels confined.

Ol. Ricini, statim.

Auge dosem Quinæ ut grana duo cum semisse addendo grano Camphoræ quaque quartâ horâ; alia ut antea.

As usual, catheterism required morning and night; urine mixed with pus as before.

Rept. Pil. Morphiæ.

24th.—Bad night; pulse 94.

Auge nocturnam dosem Morphiæ ad grani partem tertiam.

25th.—Hot; much sleep; pulse 86; patient improving.

Three glasses of Port wine daily.

℞ Decoct. Cinch. ℥iss., Quinæ Disulph. gr. ij., Tr. Opii, ♏v., Acid. Mur. Dil. ♏xv. ft. haustus quartâ horâ.

The patient went on with restless nights, relaxed skin, inability to pass the urine, but otherwise improvement, for several days.

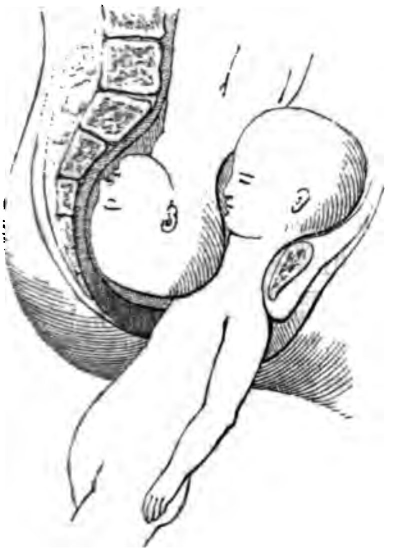
Tonics and generous diet.

June 1st.—Examination made in consequence of the patient complaining of darting pains about the bladder; the parts had sustained no serious injury; there had been slight rupture of the meatus urinarius; and on the opposite posterior wall of the vagina was a tangible thinning of the recto-vaginal septum, corresponding with the position of the head. Strength being much improved, but the bladder still powerless, with a purulent secretion, prescribed the following:—

℞ Acidi Hydrochlor. ♏ viij. (fortis); Infusi Buchu., ℥iij. ft. haustus quater in die capiendus.

℞ Quinæ Disulph. gr. ij., in pil. quoties sumenda.

20th.—Continues this treatment and is much improved; power of emptying the bladder returned this morning; perfectly recovered.



THE TATTOOING OF MOLES ON THE SKIN, PROPOSED BY PAULI.

The part should be washed with soap and water, and rubbed till the blood is introduced into the most delicate branches of the erectile tissue; the skin is then made tight, and covered with colour similar to the natural colour of the skin, which is formed of white lead and carmine. Three needles, sunk into a cork pad, so that their points project, are then thrust into the skin, and their points from time to time dipped in the paint. In extensive spots, we must proceed gradually, so as not to produce too great swelling. The most difficult part is the choice of colour corresponding to that of the skin.—*South's Translation of Chelius.*

THE SCOTCH EPIDEMIC FEVER OF 1843-4.

By John Richard Wardell, M.D. Ed.

Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 953 of last volume.]

No. VI.

IV. *The disease almost always resolved itself by a well-marked and copious diaphoresis; this taking place most generally upon the seventh, but varying from the fourth to the ninth day from the invasion.*

The ancients in their times noticed that fevers, after having reached their acmè, possess a natural tendency to pour forth some critical discharge, by which the body seems to be relieved from the deleterious effects of its contracted noxious agents—a doctrine that is also entertained by the older authors and modern writers; and as this disposition on the part of the system does not become manifest until the disease has arrived at an advanced period in its duration, and after the general disturbance has reached its maximum, when any important change in, or powerful impression made upon, the economy of the body is sure to be attended with marked results, hence it is that physicians have ever regarded the crisis of fever as a weighty consideration amid the phenomena presented. This crisis, or *turn*, as it is vulgarly called, is by no means uniform, either as to the period of its supervention or the manner in which it is characterised; in some epidemics it may be very apparent and of constant occurrence; in others the change to amendment may be exceedingly slow, and by almost imperceptible degrees. Again, in some fevers slight hæmorrhages from one or other of the internal cavities, or a moderate attack of diarrhœa, may mark the period at which the change for amelioration takes place, whilst in others a moderate or copious diaphoresis will form the indication of improvement. Hæmorrhagic discharges, increased action in the bowels, or a general perspiration, are, however, the chief modes by which the change in the system is rendered manifest; and if the natural powers of the body be not too much depressed and exhausted with the evacuation by those means produced, the febrile state then usually undergoes a declension in the degree of its intensity—if an apyrexial condition be not immediately (which is sometimes the case) produced, as in an intermittent—and the disease vanishes with greater or less celerity. Sometimes an immoderate diarrhœa, or a very powerful sweat, may come on, or a copious hæmorrhage from one or other of the outlets of the body supervene, which, instead of ushering in the commencement of convalescence, not unfrequently proves to be the unwelcome harbinger of a speedy dissolution. In cases of pure typhus, if the pulse should be very high, a copious diaphoresis may generally be looked upon as an occurrence denoting much danger; again, if the sweat be partial, that danger is more to be apprehended, as a mortal issue is then often at hand. In ordinary typhus the skin becomes moist often by degrees, and the abatement of urgent symptoms gradual, being the effect of a few or sometimes several days; or if the sweat should be profuse, as remarked, the patient not uncommonly sinks. In the seven days' fever, a patient might be labouring under hot skin, a very quick pulse, being sometimes so high as a hundred and fifty or sixty, much headache, pains over the lumbar region, a watchful restlessness, diminished excretions, with an anxious febrile expression of the countenance, and the sweat would quickly become manifest, lasting from two to five or six hours; on the supervention of which a marked difference was suddenly perceptible;—the body would then be bathed in perspiration, the headache and general pains subside, the tongue become more moist, the pulse rapidly fall, the thirst be less urgent; in fine, the general febrile state abruptly and efficiently checked; and after a few refreshing hours of sleep, which were now mostly obtained, the individual would express himself as totally free from any distressing symptoms, and being in all respects comfortable, with the exception, perhaps, of a degree of debility, which, of course, could scarcely fail to be experienced; but the fever was now veritably arrested as far as it was possible for it to be. The following cases may perhaps here, with some aptness, be cited:

CASE II.—*Crisis by a well-marked and copious diaphoresis, on the 7th day: relapses on the 13th day of the disease; resolution again by sweating.*

Christiana Drummond, æt. 17, single, a servant: admitted August 10, 1843.

Complexion light; volume of flesh good. States—Has generally enjoyed good health; had typhus fever seven years ago; with this exception never had any important illness. On the 5th August felt unwell; had a fit of shivering, which was succeeded by alternate flushings and general sense of chilliness, with pain in the head, and aching in the superior and inferior extremities and over lumbar region.

On admission (5th day of fever) complains of headache; pains in the back and limbs; some tenderness over hypochondria and epigastrium on moderate pressure; has some nausea, but no vomiting; appetite not greatly impaired; much thirst; skin feels hot and burning; respiration performed without any uneasiness, and thorax fully expands. No cough; no expectoration; urine scanty and high coloured; tongue covered with a dirtyish-yellow coat, but moist and clean at apex and edges: pulse 126, full, and of good strength.

Habeat Mist. Diaphoreticæ, ℥j. 4ta q. q. horâ.

August 12th.—Feels much easier today; had a copious sweat early this morning; complains of no pain whatever, but says she feels weak; skin cool; countenance not so feverish; tongue moist; pulse 80.

Mist. repetatur.

August 13th.—No pain; continues to improve; skin moist; tongue cleaner; pulse nearly natural, and bowels open.

14th.—Continues to improve.

16th.—To-day feels much the same as yesterday.

18th.—Does not feel so well as she did yesterday; complains of some muscular and articular pains; bowels not moved since last visit; has slight headache, and face seems a little flushed; pulse 112; tongue rather dry and glossy in the centre.

Pulv. Jalap Co. statim sumendis, gr. j.
Mist. Diaphoret. Cont.

19th.—Finds herself easier, but skin is still dry; tongue rather bright and shining; bowels opened; pulse 112.

Mist. Diaph. Cont.

21st.—Is better to-day; perspired this morning; skin moist and tolerably cool; bowels open; tongue moist and cleaner; pulse 84, of good strength.

22d.—Continues to improve.

24th.—Is much better, and allowed to get up.

Ordered common diet.

27th.—Improves.

31st.—Convalescent.

Remarks.—In this woman's case, we see that her disorder was ushered in with alternate flushings and rigors, head-ache, pains in the extremities, &c. On the morning of the 7th day a copious sweat at once arrested the progress of the fever; the pulse fell to near its natural standard, the tongue became moist and the skin cool; and on the 13th day she had a relapse, which was characterised by a close repetition of the primary symptoms; at the expiration of three more days, this, the second attack, was in a similar manner, and as effectually, resolved; viz. by diaphoresis.

Case III.—*Crisis by diaphoresis on the 7th day—relapses on the 14th day: after other two days the disease is again resolved by sweating.*

Ellen Main, æt. 40, married, had no family: admitted August 14th, 1843; hair and eyes dark; countenance pretty natural, not at all emaciated.

On being interrogated, states: is a native of Paisley; for the last few years has been residing in Glasgow, from whence she came to Edinburgh three days ago. The locality where she lived in Glasgow was one of the most crowded and ill ventilated parts of the city, where the epidemic was exceedingly prevalent. Her husband has been for many months out of employ, and she has consequently lived upon a very poor and insufficient diet. On the 8th August, after exposure to wet, felt unwell, and had a rigor, which was followed with flushings, pains in the head, small of the back, and limbs; had some nausea and inclination to vomit.

On admission (6th day of fever), complains of headache, dull pains in the back and superior and inferior extremities. No nausea; voice good; intellect unaltered. Sleeps badly, and is suddenly awakened by startling and terrific dreams. Has no appetite for food; much thirst; skin feels hot and dry; tongue loaded and parched in centre, but moist at edges; bowels confined; urine rather scanty and high coloured. Some degree of tenderness is felt upon pressure over the epigastric and hypochondriac regions: has no other pain. Pulse 108, of pretty good strength.

Habeat statim Pulv. Jalap. co. drachmam, Mist. Salin, ℥viij. cujus unciam capiat, 4ta q. q. horâ.

Aug. 15th.—Had a copious sweat early this morning, (being 7th day); all sense of pain and headache gone; has slept for several hours since sweat; bowels not opened since yesterday; tongue foul; pulse 84, and rather weak.

Sumend. Pil. Col. co. duas statim. Mist. Diaphoret omittatur. Bibat cerevisiam ad Oj. quotidie.

Aug. 16th.—Skin moist and cool; tongue rather cleaner; pulse 80, still weak; bowels open.

Habeat Vin. Rub. ℥iij. Cerevisia contr.

17th.—Feels better to-day.

Vin. Rub. et Cerevisia contr.

18th.—Continues to improve.

To have common diet.

19th.—Continues to improve.

22d.—Has had a relapse, which was ushered in by rigors, headache, pain in the extremities and over the loins; skin feels hot to the touch, and is harsh beneath the fingers; tongue rather dry; bowels confined; pulse 120.

To have low diet. Capiat statim Pil. Col. co. duas, et habeat Mist. Salin. Omnia alia omittantur.

23d.—Much the same to-day; skin still hot and dry; bowels confined.

Pil. et Mist. repetantur.

24th.—Sweats to-day; feels much easier; bowels open; tongue moist, and pulse nearly natural.

25th.—States that she feels much better; bowels moved; tongue moist and not so foul; pains gone; slept well; pulse 84, but weak.

Mist. omittatur. Habeat Vin. Rub. ℥iv. omni die.

27th.—Continues to improve.

30th.—Complains of no pain, but is rather weak; symptoms generally favourable.

2d.—Improves.
5th.—Convalescent.

Remarks.—In the instance of Main it is stated that the initiatory symptoms of the distemper were of the ordinary character; that she had the critical sweat on the seventh, and relapsed on the fourteenth day, and that after other two days the disease again effected its resolution by sweating. After the crisis, the head became free from pain, the pulse reduced in frequency, and some hours of tranquil sleep immediately followed. During the six days subsequent to the first crisis the apyrexial state was complete, the patient steadily improved, the tongue becoming cleaner, the bowels more natural, the skin being cool, the appetite being better, with other symptoms of amendment that were presented, until rigors, pain in the head, feverishness, a high pulse, &c. quickly induced the second attack.

A multitude of instances might have been given to show how regularly the crisis came on about the times above mentioned; so much so, indeed, that the critical period could almost with certainty be prognosticated, and this, it might with correctness be said, was universally by sweating. In genuine typhus the crisis does not take place until a much later period; on the seventeenth, twentieth, twenty-first, and even later still, we not unfrequently observe that symptoms of amendment are first manifest. In typhus it is after the fifth or sixth day before the patient seeks admittance at the hospital, while in the fever now described, by the fifth or seventh day a great majority of the cases had reached their greatest degree of intensity, and those fatal cases which did occur, were, with but very few exceptions, never later than the seventh day, a circumstance scarcely, if ever, witnessed in typhus. It was the remark of the late Professor Gregory, that during the whole course of a long and extensive practice, in no single instance did he remember a case of typhus terminating fatally during the first week. Here, then, we have an indisputable difference, powerfully arguing that the two forms of fever were essentially dissimilar.

On the appearance of the critical sweat, the increased temperature of the body fell in a ratio corresponding with the declension of other morbid symptoms; from being 106° or 107°, the short space of three or four hours would suffice to reduce it to its natural standard. In typhus we never find such reduction of temperature effected with this unwonted celerity, and as before asserted the excretion is scarcely ever so copious, or where it is, death almost always follows. Instances of pure typhus have come under my own observation, when, perhaps about the fourteenth or fifteenth day of the disease, a profuse sweat has occurred; and what has been the sequel? Not the tranquil and refreshing sleep, the immediate cessation of pain, and the total arrest of the whole train of febrile phenomena, as incident upon such an occurrence in the epidemic, but a state of great prostration, pallor of the countenance, a weak and compressible pulse, and a general indication of sinking was mostly manifested, instead of the ameliorated condition so common to the seven days' fever. A case very recently came under my notice fully verifying what is here set forth. A young woman, of hitherto good health, nineteen years of age, had contracted a fatal description of typhus, and I first saw her on the twelfth day of her fever. When attacked she was in servitude, and more than twenty miles from her own home. She had been bled by a practitioner in the town where she was resident at the time of the accession of the disease, but no intimation was given, either to herself or friends, that her affection was of the febrile kind. She was carefully conveyed home on the sixth day of the disorder, and a practitioner in her own neighbourhood was called in upon her arrival. She could now, though not without great fatigue, walk about the house, nor did she complain of any particular pain, but expressed herself as feeling excessively weak: this gentleman did not consider her case to be one of typhus, but merely some general disturbance incident upon slight cold, and obstructed catamenia. On my first visit, which was late in the night of the twelfth day, she complained of some degree of pain, on taking a full inspiration, in the right hypochondrium. It was stated that since her return home she had not been confined to bed, having been enabled to sit up in an easy chair over the fire, in the ordinary day-room of the house; and that, as before stated, she only complained of general debility and a sensation of sinking, with a powerless and enfeebled condition of the legs, and it was said there had been for the previous day or two unusual quickness of breathing The physician now attendant upon her recommended bleeding for the pain in the side. The pulse, it is true, was quick and of tolerable volume, but there was a peculiar feeling of irritability and want of resistive power to the touch, which, in my own humble opinion, very decidedly contraindicated the use of the lancet; consequently a dissent was urged against the proposed measure. Having made strict inquiries as to the previous history of the case, and from the general appearances manifested, there was no doubt whatever, in my own mind, that her affection, instead of being merely obstructed catamenial discharge, was veritable and undisputed typhus; and that to have had recourse to general blood-letting, would inevitably have ushered in a state of hopeless collapse. She now began to sweat, and was ere long bathed in copious perspiration. Stimulants of wine and ammonia were ordered to be administered pretty frequently, and a sinapism to the affected part on the side applied. Her friends were warned of the perilous nature of her case, and strict injunctions enjoined that the remedies should be regularly given. The next (the 13th day), the flushed and febrile countenance, the suffused eyes and burning skin, had changed to a pallid and sunken expression, and general diminution of heat on the surface; there was a prostrate appearance, when the symptoms were generally viewed which too truly foretold her precariou condition. The stimulants were continued, but increased in quantity, and given more frequently. On the morning of the fourteenth day I was not much surprised to find that she had become rapidly worse. The eyes were pale and blanched, and sunk in their foramina: congestion in the features, coldness in the extremities, with a scarcely perceptible pulse, formed the certain preludes to her fast approaching dissolution. She died in an hour from this time.*

The case of this individual forms a good example of what is insisted upon above; viz. of the manner in which we are to apprehend excessive perspiration in typhus, when the disease has advanced, and we see that instead of being, as it was in the seven days' fever, the prelude to an ameliorated condition, it proved but the unwelcome forerunner of a helpless state of prostration, that readily terminated in a mortal issue. There were, it must be allowed, some negative facts connected with the early days of the disease, which might render her case somewhat ambiguous: the tongue was

---

* At the time of this paper being sent to the press, another case has come under my notice, fully bearing out the doctrine advanced above.

Mrs. S——, a strong and hitherto healthy-looking woman, of about 40 years of age, and had had six children, was attacked with rigors, pains in the limbs, headache, &c. on the 7th of April last. One of her daughters was now a convalescent after having had a malignant description of typhus Mrs. S. was treated according to the ordinary principles, and nothing particular occurred in her case until the tenth day, when evident symptoms were manifest denoting a dysenteric complication. The usual remedies relieved this affection, although one or two slight returns came on at intervals for some days. On the eighteenth day of the disease, she appeared to be going on very favourably; the secretions were now more regular, the tongue, which had some days before looked preternaturally red and clean, and indicative of acute disease in the mucous surface of the digestive canal, which Armstrong says then much resembles "a newly dissected muscle." was more natural, and the patient expressed herself as better, and free from pain. The next morning (the nineteenth day of her fever), it was reported that she had had a very copious sweat during the night and early in the morning; indeed, so much so, that the nurse said that she was "bathed in perspiration." At the visit she looked pale and sunken; the pulse was still quick but of tolerable strength. Stimulants were now ordered to be taken pretty freely. During the next two days slight perspirations were noticed, though these were not in any very marked degree. The prostration, despite of the preparations of ammonia, and of the administration of wine and brandy, became greater. She laid in a helpless position in bed; the tongue was dry and dark, the teeth covered with sordes, and head affection had now supervened. Thus did the symptoms continue to become worse, and she gradually sunk on the twenty-third day of the disease.

Some writers are of opinion that if the sweat take place when the skin is warm, and the secretion be not of the cold clammy description, that this circumstance does not portend danger. In my own humble opinion, however, when a powerful diaphoresis does occur at an advanced period in typhus, not mattering whether the surface continue hot, or warm, for a time or not, the very worst results may be dreaded, and more or less of prostration and feeling of sinking are the invariable accompaniments, and not the resolution of the disease, as spoken of in the seven days' fever clean and moist; the intellectual faculties had never been at all disordered, and beyond a certain degree of fretful watchfulness, the sensorium was but little disturbed through the whole course of the disorder: there was not much thirst, and, with the exception of the stitch in the side, no local pain was at all complained of; yet, on the contrary, a general review of the case at once manifested positive signs infallibly denoting the febrile state: the pulse was accelerated; the breathing hurried; she had began with rigors; there was impaired appetite, and a debilitated condition of the whole system, indicating that the vital powers were labouring under some great exhaustion and anormal influence, with an indescribable condition of the features, that manifestly shewed the real nature of her complaint.

Dr. Henderson, who has taken notes during the last seven or ten years to ascertain, if possible, certain important considerations relative to febrile diseases, gives his opinion, that a copious sweat in typhus is generally a symptom fraught with the greatest danger; and according to that gentleman's experience, they very seldom recover when such event supervenes, especially if in conjunction with a quick pulse. "The critical discharge, or secretion, of the epidemic fever," says that author, "is a remarkable feature of difference between it and typhus. In a very few instances of typhus I have noticed a favourable change coincide with the occurrence of copious perspiration, but never a total cessation of the febrile state. In the great majority of instances, however, instead of copious perspiration coinciding in typhus with symptoms of amendment, it happens that it ushers in, or accompanies, a state of hopeless prostration, stupor, hurried breathing, and increased frequency of pulse."*

[To be continued.]

---

* Edinburgh Medical and Surgical Journal, Jan. 1844.

MEDICAL GAZETTE.

FRIDAY, JULY 24, 1846.

Various events tend to show that the licensing bodies are beginning to look upon the reorganisation of the medical profession by an act of the Legislature as a very remote contingency. Four different battles have been fought upon four successive medical reform bills; and the only results have been, a more prominent development of grievances, and the production of a greater amount of ill feeling than had previously existed. That the Society of Apothecaries are disposed to regard the question of medical legislation as postponed *sine die*, appears obvious from a notice lately promulgated, in which they announce their intention to resume and put in force the powers for repressing illegal practice, granted to them by the Act of 1815. We are not disposed to regard this announcement as mere *brutum fulmen*, but as arising from a sincere desire to put a check on those individuals who, from the unsettled state of the profession, have presumed to set the law at defiance. All we regret is, that the expense attendant on these prosecutions, and the stringency of the evidence required to obtain a verdict, are, and always will be, a most serious bar to the effectual suppression of unlicensed practice by means of the Apothecaries' Act.

Nevertheless, if the Society will direct prosecutions against those who are really ignorant empirics and pretenders—men who have received no medical education, and hold a diploma from no medical college empowered by law to grant one—if they will enforce the provisions of their act according to the *spirit*, and not according to the mere letter, we will undertake to say that their proceedings will have the concurrence of all who have not merely the good of the profession but of the public at heart. One circumstance which tended to render their former prosecutions unpopular, was, that they were in some cases directed against men, regularly educated to the profession, who happened to hold a license from some Scotch or Irish College or University. It is true that these persons had infringed the provisions of the Apothecaries' Act, by practising as apothecaries in England and Wales; but to us it appears that actions against such men, had too much the character of persecution to render them popular. It is absurd to allege that the powers of the Act were conferred on the Society for the suppression of this class of practitioners, or that in a new law for the checking of quackery, any scheme would now be entertained by the Legislature which would give to a College of one kingdom the power of prosecuting a person holding a diploma from a College in another kingdom.

In the discussions on the Medical Reform Bill, the injustice of arbitrary proceedings of this kind against regularly licensed practitioners called forth strong remarks from all quarters; and we think, in resuming the exercise of their powers, the Apothecaries' Society would do well to take this as a strong test of popular feeling on the subject. Well may the Royal College of Surgeons of Edinburgh, in their Parliamentary return respecting the rights and privileges of their members, state prominently, that "they have been by the custom of the country received as practitioners of these arts in every part of Scotland, and until the passing of the Apothecaries' Act in 1815, in every part of England except London." Why is this?—Is the curriculum of education deficient? is it less practical or less comprehensive than that of the Apothecaries' Society? Let the two curricula be compared, and we think the answer will be decidedly in the negative. The language used by the Society in their advertisement, cannot be fairly or equitably applied to men holding the diploma of this College; for the motive alleged for undertaking these prosecutions is, that "numerous individuals are entering upon the practice of medicine who have given no evidence of their possessing the requisite skill and ability for such practice, *to the serious detriment of the public health*, and to the discouragement of a zealous course of study on the part of medical students." We have taken the Royal College of Surgeons of Edinburgh as an illustration, but our remarks equally apply to the holders of all Scotch and Irish diplomas, which have been obtained *bonâ fide* by a proper course of study and examination.

After the plainly expressed opinion of the Government, that the time had come for the abolition of all local restrictions and privileges in medicine, we cannot believe that the Society will be so ill advised as to carry out their manifesto against regular medical practitioners, merely because they have not submitted to be examined at Apothecaries' Hall! They certainly have the law with them, but common sense, and we believe the feeling of the majority of the profession, is, on this subject, against them—*summum jus, summa injuria.* A few English medical practitioners, licensed under the act of 1815, have, it is true, been accustomed to regard Scotch and Irish practitioners as intruders, and have looked upon English practice as a privilege of their own by purchase. They have denounced these individuals to the Society, and have taken an active share in prosecutions against them. We doubt whether this illiberal feeling now exists to any extent; and, when manifested, it is probably to be ascribed to some professional jealousy, or a desire to oust by legal technicality a rival whose practice may be, perhaps, more favourably received in the locality. English medical practitioners have considered themselves harshly treated by the French government, because they were not allowed to practise in France, even among their own countrymen, although provided with a regular English diploma. In a foreign nation, however, there was greater apparent reason for carrying out the law which rendered a French diploma necessary. Nevertheless, on this side of the channel, the attempt made by French practitioners to enforce the law, was very probably regarded as a species of persecution both unjust and indefensible. If there be any who are still disposed to treat Scotch and Irish practitioners as intruders in England, we would request them to consider whether their exclusion by an old Act of Parliament, conferring powers now universally condemned so far as they are extended to regularly educated men, would not be a much greater act of injustice. Men living under the same government, speaking the same language, acquiring professional knowledge under rules equally adapted for the purposes of medical education, and duly licensed after a proper examination, should be allowed to practise when and where they please. Exclusive privileges adverse to this principle are neither beneficial to the public nor to the profession; and we are much mistaken if they will ever again be recognised in any future system of medical legislation.

Let the Society of Apothecaries, therefore, carry out their resolution, but confine their prosecutions to those who really "cause serious risk to the public health:" *i. e.* to quacks and all the unlicensed dabblers in physic. We trust that the profession will aid them in this laudable endeavour, not by merely announcing the names of delinquents, but by procuring such evidence of their prescribing and receiving payment for medicines and medical attendance, as will enable the Society to commence a prosecution with some hope of success. We have elsewhere shewn that these prosecutions cannot be lightly undertaken; since, owing to the legal forms requisite for putting in force the powers of the Act, they involve considerable expense, and whether successful or unsuccessful, they occasion a heavy sacrifice of the funds of the Society.* It is this which has paralysed the efforts of the Society; for to inflict a fine of twenty pounds upon a person who may not be able to pay twenty farthings, is no compensation for the expenditure of sixteen times the amount in the shape of necessary costs for prosecution. It is very easy to allege that expense is not to be regarded on occasions where the enforcement of a public principle is at stake. This is all very fine in theory, but it entirely fails in practice; for unless the law provides funds, or great facilities for the enforcement of penalties, its operation, in spite of the best intentions, must remain a dead letter.

Reviews.

Beiträge zur Ohrenheilkunde. Von DR. WILHELM KRAMER. Berlin.
Contributions to Aural Medicine. By DR. WILLIAM KRAMER. 8vo. pp. 314. Berlin. 1845.

DR. KRAMER is very well known as an indefatigable labourer in the field of aural medicine. In 1836 he published a work on the Nature and Treatment of Diseases of the Ear, a translation of which, by Dr. J. R. Bennet, appeared in 1837. The present volume, containing the additional experience of ten years, may be regarded as an appendix to Dr. Kramer's more elaborate treatise. The main object of the author, in publishing this appendix, has been to simplify the treatment of aural diseases as much as possible, and to suggest new and accurate methods of diagnosis. One of the most important features of the work is the collection of a large number of statistical tables relating to aural diseases. These amount to nineteen, and they present, in a concise and easily accessible form, many important results bearing on practice and treatment. The work is divided into four sections, the first of which occupies more than one half of the volume. The other three sections are on acoustics in relation to the human ear, on electro-magnetism in the treatment of deafness and noises in the ears, and the last on otorrhea cerebralis.

---

* See vol. xxxv. p 1250. The average expense in six actions amounted to £320 in each case.

Among the numerous interesting facts brought to light by the statistical tables, is that which relates to the very unequal occurrence of aural diseases in the two *sexes*. It would appear, from Kramer's experience, that males are nearly twice as subject to these diseases as females, the relative numbers being 1274 : 726, or 1·6 : 1. This will appear the more remarkable, when it is considered that in all large populations females greatly predominate. Thus in London, with a population of two millions, the females exceeded the males by the large number of 121,078. Some special diseases of the ear, *e. g.* those which proceed from greater exposure to atmospheric influences, are more frequent among males in the proportion of 3 : 1. With regard to the influence of *age*, it would appear that out of 2,000 cases of aural disease, 504 or 1-4th occurred in children under ten years. In the second decennial period of life, the proportion was 1-5th; and in the third, 1-6th. Between the ages of 60-69, only 23 cases occurred. The form of disease most frequent in the first decennial period is chronic inflammation of the membrana tympani. This existed in nearly one-half of the cases; while the next most frequent form of disease was nervous deafness, affecting the internal ear. These cases amounted to more than 4-10ths of the whole. A very common form of disease in the aged, is inflammation of the lining membrane of the meatus externus; but one-fourth of the cases above 60, assume the form of nervous deafness.

We have one remark to make upon this table, which is, that in considering the ages most liable to aural diseases, it is necessary to bear in mind the very different numbers of persons living at the different periods of life. One cause of the apparent frequency of these diseases in young subjects may be, not that there is a greater liability at a particular age, but that a greater number are actually living who are all equally exposed to attacks of aural disease. In this respect, the first and sixth decennial periods of life are strongly contrasted. From another of the author's tables, we learn that 556 cases out of 2,000 were, at the time of examination, cases of nervous deafness, and the patients were between the ages of 20 and 40.

Out of 4,000 ears (belonging to 2,000 patients), in 361 cases the right or the left ear alone was affected. M. Kramer then deducts the 261 sound ears from the total number, and this leaves 3,639 ears more or less affected! This will suffice to show the minuteness to which our author carries his statistics. He considers that the most frequent cause of deafness is the closure of the Eustachian tube: and, with respect to the causes of aural diseases generally, the most frequent traceable cause (1-6th) was exposure to cold—next to this hereditary transmission (1-11th). In more than one-half of all the cases, the disease could not be referred to any particular cause.

It would appear from the author's observations, that the homœopathists, who have tried their hands at most diseases with astonishing *(statistical!)* success, have been baffled in the treatment of those which affect the ear. The fact is, we suppose,—the globules and attenuations do not produce the various forms of deafness in the healthy; —hence they fail to remove them when they exist in the diseased. There is no doubt, however, as Kramer suggests, that the homœopathists have found the treatment of these diseases a very profitable speculation. He happened to have personal knowledge of 33 cases of deafness, in which the grand masters of the art, Hahnemann, Stüler, Hartmann and Rummel, entirely failed in producing the least amendment (158). The followers of Hahnemann, if we are to take their own statements, have been more successful than Hahnemann himself. They have not only succeeded in curing the deaf: but have actually, by their globules, cured three persons affected with deafness and dumbness!

In the treatment of aural diseases, the author relies only upon the application of remedies based on a proper exploration of the organ and a clear diagnosis. The alleged cure of these diseases by empirical means cannot be in the least degree trusted. This, however, is the fashionable mode of treatment in England: all aural diseases are confounded under the general name of *deafness;* and the alleged cures are worth nothing for practical guidance, because a proper investigation of the cause and seat of the malady has not been made. The 19th table, on the results of the author's treatment of aural diseases, is a very interesting document, of which we can only give a brief summary. Dr. Kramer classifies the diseases, as those which affect the external ear—the meatus, the membrana tympani, the middle ear (tympanum and Eustachian tube) and inner ear (labyrinth). Out of 2,000 cases treated by him, there were *cured* 518; *relieved* 1,050; and *uncured* and *unrelieved* 382; including 46 deaf and dumb cases. Out of the 518 cures, in 213 the disease was inflammation of the lining membrane of the meatus; and in 164, inflammation of the mucous membrane of the tympanum and Eustachian tube with obstruction. There were 397 cases of chronic inflammation of the membrana tympani, from the treatment of which the results obtained were as follows:—*cured* 28, *relieved* 324, *uncured* and *unrelieved* 45. It appears that 1,028 cases had the form of nervous deafness the disease affecting the labyrinth; and of these it is interesting to know there were *cured* 54, *relieved* 703, and *uncured* and *unrelieved* 271. Our space does not allow us to enter into further details; but we do not know any summary of the treatment of these diseases upon which we are more strongly justified in placing reliance. Dr. Kramer has had in view the improvement of medical practice in relation to these diseases; and his table of the results of treatment possesses this value above all others which we have seen, — that no less than sixteen different forms of disease are here specified. He has evidently not had the desire to exaggerate the results of his practice in order to win the public *ear* by ranking the minor and much more curable forms of disease of the meatus, with those which affect the labyrinth. In the former, all of his cases were cured, while in the latter the cures were rather less than 1 in 40!

The author very properly rejects the list of pretended cures annually paraded by the Director of the Royal Dispensary for Diseases of the Ear, patronized as it is by Royalty, by a batch of dukes and duchesses, marquises and marchionesses, and supported by "fancy fairs," and the continual circulation among the public of gilt edged pamphlets, &c. In his former work Dr. Kramer remarked, that we should not allow ourselves to be imposed upon by the statistics of this Royal Dispensary. According to Kramer's statement it appears that from 1817 to 1829, inclusive, it was alleged that there had been treated in the said dispensary, 8,782 persons, of whom 3,780 were dismissed *perfectly cured (!)* 2,497 improved, and only 2,505 without any improvement. In this report, observes Kramer, there is a total want of all intrinsic credibility. We have now before us an advertisement just going the *vernal* round of the newspapers, in which it is announced that since the establishment of this charity (!) in 1816, upwards of 14,350 poor patients afflicted with deafness *and other diseases of the ear,* and several cases of deaf and dumb, have been cured *or* relieved! Then follows a long list of subscriptions. We confess we should like to see a fair tabulation of the results of the practice at this Dispensary from the hands of such a man as Kramer: for, like him, we place not the least confidence in the results of the treatment of aural diseases, when the nature of the disease and the part of the ear affected, are not distinctly defined.

We must here close our notice of Dr. Kramer's treatise, which we have no hesitation in pronouncing to be a very valuable addition to the few good and practical works which exist on the subject of which it treats.

The Application of Prismatic Reflection to the Investigation of Disease in the Open Cavities of the Body. Part II. By Adam Warden, M.D. F.R.C.S.E.

Most of our readers are doubtless acquainted with some ingenious modifications of specula for examining the condition of the external meatus of the ear, and other passages, which have recently been invented by Dr. Adam Warden. The present brief communication contains descriptions of instruments which, by a nice adaptation of a totally reflecting prism and a tube, enable the surgeon to ascertain the condition of internal surfaces with singular accuracy. It would be useless to give a description of Dr. Warden's instruments without the explanatory diagrams; we must therefore be content with referring our readers to the original paper. But it may be interesting to quote a few of the author's observations relative to the cases in which his specula are applicable to the detection of deep-seated lesions. He remarks, that the operation of breaking down the stone in the bladder is conducted through the medium of a straight tube one-third of an inch in calibre. Through canulæ of narrower dimensions, and twelve inches long, he can recognise, with the aid of the prism, the precise condition and aspect of the surface presented at the further extremity of the instrument, or over which it may traverse; and, what is of more everyday importance and easier range, he has submitted to ocular inspection stricture in the urethra. He has marked the puckering of the mucous membrane at the strictured part, observing the passage itself to be contracted so as to admit little more than a bristle; and that the diseased structure had not only the solidity discoverable by the bougie, but the varied characters demanding a severe and immediate, or a palliative and temporising treatment. He also conceives that important service may be derivable from the prism and canula in the unforeseen difficulties in the extraction of the stone, which occasionally occur in the operation of lithotomy; likewise, in the exploration of gun-shot and other wounds where foreign bodies lodge and require to be extracted. It may be anticipated, he thinks, "that, in some cases of preternatural labour, also in fixing ligatures on polypi of the uterus, and in many of the most prevalent diseases of females, the principle of prismatic illumination is fitted to extend our acquaintance with the precise characters of those morbid affections whose treatment is unsuccessful only because our knowledge is inexact or altogether deficient. In the case of the nasal passages, Dr. Warden considers that ozœna and other forms of ulcer, as well as early stages of polypus, might be thereby recognised, and more certainly treated or eradicated; also light may be (literally) thrown upon the forms of deafness connected with the eustachian tube.

He further mentions that he has proved, on the dead subject, the practicability of passing a straight tube, of half an inch calibre, and two feet in length, by the mouth, into the stomach, without leaving any mark of abrasion or injury of the soft parts in its passage. He admits tnat the importance of such a reach of ocular observation is not, at present, very obvious; but through a tube of the size described, he is persuaded that he could depend somewhat on throwing light, by means of the prism, upon the character of a diseased surface presented at its further extremity, or over which it might traverse; and, in proportion as its length was diminished, so as to bring the object nearer to accurate vision, as would be the case in stricture and other affections of the gullet, the view and indications will be proportionally clear.

Referring to the adroitness with which conjurors appear to pass straight instruments from the mouth into the gullet, he mentions that Mr. Anderson, the Wizard of the North, has engaged to put him in communication with several persons whom he knows *bonâ fide* to have performed this feat a hundred times, and he watches to avail himself of such an opportunity for testing the instruments, divested of the agitation of a patient under any real emergency;—a good illustration of the principle that a really philosophical inquirer will never disdain means, however humble, that may tend to elucidate the problems upon which he labours.

A full description, with diagrams, is given of an apparatus by which the state of the glottis may be accurately examined. The following case is given in illustration of its uses.

"CASE.—Mrs. J. had been the subject of medical treatment for chronic inflammation of the pharynx, of nearly a year's duration, and which had lately spread in the direction of the glottis, attended with painful deglutition, and paroxysms of suffocative cough. On account of the latter complication supervening, she was sent from the country here for advice. On inspection, there was seen a general velvety hypertrophy, and crimson injection of the mucous membrane covering the fauces and pharynx, while, as is generally the case in chronic inflammation of the mucous tissue, the sensibility of the parts was small in proportion to their high vascularity. The fits of cough were described as accompanied with dyspnoea threatening strangulation, and terminating in the elimination of a very tenacious stringy mucus, proceeding distinctly from the upper part of the throat. The patient was placed opposite to me for observation, on a common chair, by the side of a table, on which stood a powerful argand lamp, with a large prism attached, so as to throw the full light of the lamp into the fauces and pharynx. After the preliminary examination, and quieting the irritability of the parts by touch with the fingers, there was no longer any impediment or inconvenience experienced from the tendency to retching. The dilator faucium was employed to depress the tongue, and expand the isthmus of the fauces; the port-prism, with the heated prism attached, was then conveyed along the dilator, to occupy its place in the pharynx, and complete the arrangement for observation. The epiglottis was immediately seen to be nearly three times its natural thickness, and to be covered with vividly-injected mucous membrane, similar to that which invested the neighbouring surfaces; but it was only when efforts to swallow were made, that the arytenoid cartilages and glottis in a similar condition of thickening, were raised out of concealment, and brought to show their picture in the reflecting face of the prism. Observation was thus repeated and suspended at intervals, by the momentary dimness of the prism during expiration, until full information was obtained, that there was neither polypous excrescence nor ulceration, calling for direct surgical applications, but only such a condition of disease as was still amenable to ordinary treatment by leeching and assiduous counter-irritation."

Dr. Warden has had other opportunities of examining the glottis, in which, however, the information was of a negative kind, proving the absence of suspected disease.

The uses to which Dr. Warden's instruments may be advantageously applied are probably not fully recognizable at present, but the inventions are certainly of a most ingenious kind, and may, under various modifications, prove of singular value in the recognition of deeply seated lesions of the mucous passages.

On Tubercle of the Brain in Children. By JAMES MAXWELL ADAMS, L.R.C.S.E. Submitted to the Faculty of Physicians and Surgeons of Glasgow, when Candidate for admission into that body. 8vo. pp. 32. Glasgow. 1846.

DR. ADAMS has succeeded in combining many highly interesting and valuable facts with regard to a disease which has certainly not received sufficient attention from systematic writers on the diseases of children; the author has united the leading statements of MM. Rilliet, Barthez, Dr. Hennis Green, and other recent observers, with the results of his own personal experience and reflection, and has certainly done much towards establishing additional information with respect to the disease in question. We cannot better do justice to the author's labours than by giving a brief abstract of the facts and opinions which he has advanced. It must be premised that Dr. Adams does not include, in his remarks, tubercular disease of the meninges, *i. e.*, the small hard cartilaginiform granulations found upon the coverings of the brain, and which cause the *tubercular meningitis* or *arachnitis* of the French writers We apprehend that, in certain cases, where large tubercular masses are found imbedded in, and apparently, at first sight, originating from the substance of the brain, it will be found that the adventitious product is actually in connection with the folds of membrane which dip down into the anfractuosities, but it is not necessary to dwell further upon this point, as it is of no real practical importance. The principal of the symptoms are briefly enumerated as follows: they are considered more in detail in a subsequent part of the essay, to which we direct the reader's attention:—

"A child of a few years old, of a scrofulous habit or tendency is affected for several weeks or months with headache of an intermitting character, often accompanied with vomiting or nervous tremors. These are followed by a sense of debility and disinclination for motion or ordinary sports and exercises. Epileptic seizures, convulsions, or strabismus, may also be present. Gradually the disposition of the child alters, and he appears fretful, retired, and melancholy. The appetite becomes depraved, or entirely fails, the bowels constipated, and the body attenuated. The face acquires a peculiar, pallid, anxious expression. As the disorder advances, these symptoms, at first partial and intermitting, increase in frequency and severity, and at length are permanent; when, after several days of complete or partial stupor, the child dies comatose or convulsed."

Among other particulars, it is mentioned that—

"The appearance of the countenance is worthy of note; Dr. Gerhard informs us that it is so peculiar that the sister of one of the wards, at the Children's Hospital, was accustomed to distinguish the disease with much accuracy, from the mere aspect of the child. The face is pale, with occasional flushes of redness on one or both cheeks; mouth frequently a little deviated; lips compressed, or half open; the eyelids are almost invariably closed, or a little separated; nostrils widely dilated. But the most distinctive character is the peculiar listless expression, with occasional grimaces and movements of the lips, as if tasting an article of food; this character does not admit of description, it must be seen to be appreciated."

It is further observed, that—

"An acute form of the disease is occasionally met with, having a rapid course, and the symptoms of which are so closely assimilated to those of acute hydrocephalus, that they alone will hardly furnish sufficient data for a correct diagnosis. There are few practitioners who are in the habit of verifying their opinions and practice by necroscopic observations, who cannot recal to their remembrance cases of acute hydrocephalus, where inspection after death showed the presence of tubercles in the brain, but which were regarded at the time as a mere evidence of an unhealthy constitution or anomalous coincidence, and not as having any especial connection with the disease for which the patient had been treated. Such cases generally terminate fatally within a period of a fortnight or three weeks, and the symptoms accord pretty nearly with the following description:—During a state of ordinary health, and after some violent exciting cause, as a blow or fall, or more frequently when convalescing from some infantile disorder, a child is suddenly seized with convulsions, headache, or vomiting, followed often by paralysis of the lower limbs or one side of the body; the bowels are commonly constipated, and the appetite fails; the intelligence meanwhile remains good. The child continues in this condition for a period varying from a few hours to a fortnight, and seldom longer than three weeks, and death finally ensues, attended with coma or convulsions."

Dr. Adams gives an analytical table of 171 cases of tubercle of the brain in children, and freely admits that, from the absence of many details, the analysis is necessarily very incomplete; the following deductions from this summary are, however, deserving of attention:—

"The frequent co-existence of tubercles in other organs of the body, when found in the brain, is shown in analyzing the table:—

"Tubercles were found in other organs the body in 110 cases.

"Tubercles stated to have been found only in the brain, 4 cases.

"Other organs not examined, or their condition not mentioned, 57 cases.

"And, taken in another point of view, it is further shown, from a table given by MM. Rilliet and Barthez, that in 312 tuberculous or scrofulous children, there were found tubercles in the brain in 37 cases, or rather more than one in nine."

"To show the age at which the disease is most frequently met with, I have divided the cases, of which the ages are given, into four periods:—

From 0 to 3 years . . .	16 cases.
From 3 to 5 years . . .	44 cases.
From 6 to 10 years . . .	57 cases.
From 11 to 15 years . . .	21 cases."

'It thus appears that, under the age of 3 years and above that of 10 years, the disease is comparatively rare; while from 3 to 10 years it is of most frequent occurrence: the two periods mentioned, giving respectively 37 and 101 cases. The collective ages of these 131 patients gives an average of rather more than 6½ years, and about this age, which corresponds with the commencement of the second dentition, it will be found that the majority of cases occur.

Sex seems to exert but little influence; for, by reference to the large table, it appears that the proportion of both sexes is pretty nearly balanced. Thus, of 137 patients, 73 were males and 64 females, a preponderance certainly of the former, but accounted for, in a great measure, by the constant preponderance of the male sex at an early age.

The *morbid appearances* found after death are not uniformly alike, but differ in form and in degree.

Tubercles are found in the brain in three distinct forms:—*First*, Isolated in rounded portions, from the size of a millet-seed, to that of masses five inches in thickness. *Second*, As a layer of tuberculous matter situated between the membranes and external cineritious substance of the brain, commonly following the direction of the sulci, and modelled on the external surface of the brain. *Third*, Infiltrated in the substance of the organ. The first of these lesions is by far the most common; the second variety is uncommon; the third exceedingly rare. All the cases that have come under the author's own notice, and nearly all that he has found recorded, belong to the first description.

The affections with which tubercles of the brain may be confounded are, acute and chronic hydrocephalus, cerebriform tumors of the brain, hydatids, arachnoidean hæmorrhage, and hypertrophy of the brain. Now, the symptoms to which each and all of these may give rise are so associated and so much alike, that it would be exceedingly difficult to classify them with anything like precision; yet there are circumstances in the history of the patient, and also of these different affections, which increase or lessen the probabilities of their existence, and these should be considered in detail as the cases present themselves. The author alludes, briefly, to some of them.

Thus, chronic hydrocephalus is rare after the age of three years, while it is mostly after that period that the hydrocephalus of tubercle is observed. True epileptic seizures, or amaurosis, independent of general insensibility, so frequent in the tubercle, are, Dr. Adams believes, rarely noticed in uncomplicated hydrocephalus, either chronic or acute, but mostly in connection with tumors or growths within the cranium. Cancerous tumors of the brain produce symptoms so analogous to tubercle, that it would be affectation to draw a marked line between them. But the researches of Dr. Walshe establish the fact that cerebral cancer is of very unfrequent occurrence in early life, but that it becomes more common with advanced age; for of fifty-six cases of cerebral cancer occurring in individuals up to eighty years of age, there were found only five instances under the age of ten years. It will be recollected that cerebral tubercle occurs in an increased ratio; consequently, when there is evidence of the presence of a cerebral tumor co-existing with a scrofulous diathesis, the chances of its being cancerous are reduced almost to zero. The author lays great stress upon the existence of a well-marked scrofulous constitution, as a diagnostic sign in cases of this description.

> "It is, therefore, from a knowledge of the frequent occurrence of tubercle of the brain in children, from the presence of a strumous diathesis, from the irregularity of certain well-marked cerebral symptoms, and the irregular intervals which separate one symptom from another, that the diagnosis of this affection mainly depends. An attack of epilepsy may not be succeeded by any appreciable sign of ill health, for several months or a year. But if in a child so affected, and which besides gives evidence of a scrofulous diathesis, there should occur headache, vomiting, nervous tremors, paralysis, amaurosis, change of temper, &c., each or all of these symptoms; if they follow a variable course, having intervals, exacerbations, and accesses of fever, in the manner I have previously described, we have then every reason to believe that the child has tubercle of the brain."

With regard to treatment, the author has nothing to say. The complaint appears to have been invariably fatal, and the treatment hitherto employed seems not even to have afforded the poor satisfaction of mitigating symptoms. In the way of prevention, there is greater encouragement for the medical man, for he can adopt such means in strumous families, as are likely to strengthen the general health, and to counteract the tendency to so fatal a malady.

***On the Health of Towns, as influenced by Defective Cleansing and Drainage,* &c. A Lecture by W. A. Guy, M.B. Cantab. Professor of Forensic Medicine in King's College, &c. London: Renshaw, 1846. pp. 48.**

Dr. Guy has here accumulated within a small compass the principal facts connected with the imperfect cleansing and drainage of towns, and the application of the refuse to agricultural purposes. The lecture is of a popular character, and is well adapted to induce the *public* to direct their attention to the important subject of which it treats, and which, according to the assurances of the new Minister, will at no remote period be placed under legislative control. The Lecture embraces the substance of much of the evidence given before the Health Commission; and many of the facts must therefore be familiar to our readers. There can be no doubt, whether we admit to their full extent the statistical results or not, that defective drainage is one of the most fertile sources of disease in all large towns. Having established his position, the writer proceeds to show—1st, that the refuse matters of our towns are rich in the elements of production, and 2d, that they may be conveyed and applied to the land with facility and economy. It is unnecessary to enter into the proofs of the first proposition, as our readers must be well acquainted with facts derived from the researches of Liebig, Boussingault, and others. We must take leave to doubt whether the author is equally successful in showing that the enormous refuse of our sewers—the excreta of two millions of human beings, with an equal number of animals—can be so *easily* disposed of with economy and safety. We have reason to know that this question has occasioned some perplexity to the Commission now sitting, and that opinions differ widely respecting the facility, economy, and safety to suburban populations of the plans proposed for the application of the refuse as manure. Some experiments on a *large* scale are required to elucidate this question; and until these have been performed it may be reasonable to suspend our judgment. In the meantime, although we admit with Dr. Guy that water is an excellent medium for conveying manure, yet it must be remembered, one of the most useful fertilizing compounds in the excreta, phosphate of lime, is insoluble in water, and would therefore remain locked up in the deposit. The great object at present is to deprive this deposit, by some speedy and effectual means, of its offensiveness.

In regard to this important branch of medical police, it must be confessed that we occupy a most disgraceful position, considering the character we give to ourselves as a civilized community. While in any one of the *corsias* of Milan the discovery of a cabbage-stalk in the street would subject the inhabitants to a fine, a foreigner may witness on any day in the open street of Whitechapel, a wide running stream of decomposed blood, derived from the slaughtered carcases of animals.

Selections from Journals.

ANIMAL CHEMISTRY.

ON THE PRESENCE OF COPPER AND LEAD IN THE BILE.

Last year Bertozzi made the discovery that copper is contained, in a tolerably large amount, in brown biliary calculi; he was never able, however, to detect this metal in the bile itself. By the announcement of Bentozzi's discovery Heller was induced to pay attention to the subject, and after a careful examination was led to a similar conclusion; namely, that the coloured biliary calculi contain a large amount of copper.* The method adopted by Heller for the detection of copper was more simple than the one employed by Bentozzi. Heller directs several of the darkest calculi to be rubbed together into a rather coarse powder, and then burned in a platinum crucible previous to the addition of nitric acid. The ash of the combustion is to be treated with a little nitric acid to remove any remains of carbon, then dissolved in water acidulated with nitric acid, neutralized, and finally tested for copper by the ordinary reagents.

Heller has since continued his researches on the subject, and has extended them to an examination of the bile itself for copper and other metallic substances.† He repeatedly examined the bile both of children and adults, who died of various diseases, and he states that in the bile of adults he has many times detected copper, but never hitherto in that of children. The mode of examination which he adopts is the same as that pursued in the case of biliary calculi. He observes, that after combustion of the bile, and before he applied the tests for copper, he could always tell if this metal were present, by the fused residue, when cold, assuming a light blue or bluish-green colour; when this change of colour did not take place, no bile was discovered by the employment of tests. To detect the presence of copper he found it necessary to employ the bile not merely of one but of several gall-bladders, and only that which after combustion underwent the change of colour above mentioned. He never detected so much copper in the bile, however, as he found in the dark biliary calculi.

---

* Archiv. für Chemie und Mikroscopie, vol. ii. page 228.

† L. c. page 321, et seq.

Heller also mentions having examined the urine and blood of a young man, a house-painter by trade, who was severely afflicted with lead colic; he was not able to detect a trace of lead in either of these fluids, but after the patient's death he examined the bile, and found there both lead and copper. He observes that copper and arsenic having been already most clearly found in the liver in cases of poisoning with these substances, it seems probable that those metallic salts which are foreign to the composition of the blood, and useless to the system, are, even when present in small quantities, gradually separated from the blood by the liver, and so removed from the system. This supposition will account for the immunity from the ill effects of lead, so long enjoyed by those persons who make free use of this metal in their trades, the poison which in these cases is gradually taken into the system being as gradually removed by the liver. The same applies also to copper; and, as Heller observes, it seems highly probable that we are from time to time taking in minute quantities of this metal in our food, and that this becomes separated from the blood by the liver, and so is found in the bile. The fact that this metal is not always found present in the bile is in favour of this supposition, [and a proof that copper is not a necessary ingredient in this fluid, as most probably it is not also in any other of the fluids or tissues of the healthy body; the same may be said also of lead.] This fact, that metallic salts which are foreign to the system are deposited in the bile, is of considerable therapeutic importance; worthy of regard also is the circumstance that the yellowish-brown, the brown, and the black gall-stones, always contain copper, and that the amount of this metal is proportionate to the dark colour of the calculi. Those white cholesterine gall-stones, which possess merely an external white crust, and have their centre or nucleus of a darker colour, contain copper only in the latter part, which is tinged brown by the bile-colouring matter: the outer white layer containing not a trace. Almost all the white gall-stones possess this central brown nucleus. Moreover, in the dark-coloured gall-stones copper is always contained, though not in the bile of the same subject; a circumstance which renders it probable that the copper has some influence in the formation of the biliary concretions.

Heller suggests the importance of instituting a series of experiments on animals, to consist in administering to them in their food minute quantities of lead, copper, and other metallic salts, with the object of determining whether these salts are separated from the blood by the liver, and if so, which of them are so especially.—*Heller's Archiv.* 5 and 6, 1845*.

THERAPEUTICS.

ON THE INTERNAL AND EXTERNAL EMPLOYMENT OF NITRATE OF SILVER.

BY DR. HELLER.

THE different views which have been entertained by writers in regard to the remedial action of nitrate of silver, especially when used internally, have induced Heller to make some investigations on the subject.

Although the nitrate of silver is generally well known and highly esteemed as an external application, yet respecting its efficiency as an internal remedy various opinions are entertained.

Experience has proved the good effects resulting from the local employment of this substance in affections of mucous membranes, of the eye, of the organs of generation, and from its use as an escharotic in various diseases; and the explanation of all this is very easy when we examine more closely into the effects produced by the nitrate of silver in such cases. For example, this salt of silver has the property of coagulating albumen, and with it cellular substance generally, and of precipitating extractive matters: it, in fact, destroys the vitality of these substances, and renders them useless to the system; wherefore they are separated and removed from it as so much waste and dead matter. This salt also decomposes the chloride of sodium, which all secreted fluids contain, as also the phosphates: an insoluble chloride of silver and an insoluble phosphate of the oxide of silver being thrown down. Chloride of sodium and phosphates are contained in all secreted fluids, such as mucus, pus, tears, synovia, lymph, &c.: the fluid also within cells, and that in which the cells themselves float, contain albumen, chloride

---

* In a more recent number of the Archiv. (Heft 1, 1846), Heller's statement of the presence of copper in human bile is confirmed by Dr. Gorup-Besanez, who observes, that he has frequently detected it there.

membrane. In the fluid which is
undantly poured off from a mucous
ne, after the application of nitrate of
it, may be found epithelium, chlo-
silver, phosphate of the oxide of
ogether with precipitated albumen
active matter: we can, therefore,
rtainty affirm, that the nitrate of
es produce some effect by its local
ion.

used as an internal remedy, how-
trate of silver behaves in a totally
: manner. Heller performed several
ents with the view of determining to
ount the silver, when employed in-
, is taken into the secretions and
ns. He carefully examined the
rine, and fæces of patients who for
months had been taking nitrate of
large quantities. He also tried
ect was produced by the direct addi-
itrate of silver to gastric fluid. The
of these experiments are as fol-
.

veral cases of epilepsy nitrate of
as administered internally in doses
from three to ten grains daily; thus
1 took ten grains daily, and a lad,
3, twelve grains daily for three
. In this latter case, therefore,
vo ounces and a quarter were admi-
altogether, yet without the disease
the slightest degree mitigated, or
er effect on the system being pro-
In none of the cases did the skin
in the least discoloured. The blood
eral times examined in many of the
t presented the character commonly
the blood of epileptics, especially
se in the quantity of albumen; but

has been administered. To prove this, nothing more is necessary than that the fæces should first be reduced to ashes in a platinum crucible, and then the mineral salts which remain dissolved by a little dilute nitric acid; after this the chloride of silver is left behind, and may be weighed and estimated; it is completely soluble in ammonia.

Heller found that when he mixed nitrate of silver with the gastric fluid, chloride of silver was at once precipitated, for the gastric fluid contains a large quantity of the chlorides of sodium, potassium, and calcium; when ten grains of the nitrate was added to an ounce of the gastric fluid, the whole was precipitated in the form of chloride. From this fact Heller concludes, that so soon as nitrate of silver is taken into the stomach it is precipitated as chloride, which being an insoluble substance passes through the entire length of the intestinal canal, and appears as such in the fæces; the results of examination of the blood and urine also show that none of the silver enters into the blood. This renders easily intelligible the circumstance that such large doses of nitrate of silver may be taken without any observable effect on the system resulting, yet, according to Heller, leaves unexplained the statements of some writers, who describe the skin of patients who have employed the nitrate of silver for some time, as becoming brown or even black; he seems inclined to doubt the truth of these statements, inasmuch as they are opposed to the results of his experiments, and to the fact of this decolouration never occurring in any of the cases which he noticed.—*Heller's Archiv. für Physiol. und Pathol. Chemie und Microscopie*, vol. i. p. 324.

a yellowish looking matter. I found a scrotal hernia on the right side, the size of a hen's egg; the bulk of this, after a little trouble, was reduced, but a portion the thickness of the little finger, occupying the inguinal canal, and having the testicle at the bottom, remained; this was exceedingly tender to the touch, and could not, by any justifiable effort I could use, be returned. The warm bath, cold applications, enemata, and the forced injection of warm water through a long tube, failed to procure either a motion or the evacuation of flatus, or to enable me to return the intestine. These means having been employed that day and the greater part of the following, and tympanitis and tenderness of the abdomen commencing, I proposed the operation. It was performed in the usual way on the 11th. It was my intention, after dividing the stricture, to return the intestine without opening the sac; but, finding this impossible, I opened the sac, which contained a knuckle of intestine of a light port-wine colour, in contact with and adherent to the testicle by a band of coagulable lymph, which was easily torn through. The stricture being divided, the crying of the child forced down several folds of the intestine, the colon of which strongly contracted with the strangulated portion, and the indented line of demarcation caused by the stricture formed a distant boundary between the two. The most difficult part of the operation was to reduce the intestine, the forcing efforts and crying of the child being insurmountable until the difficulty was overcome by the occurrence of fainting. Three sutures, compress and bandage, were applied. The mother, who had been greatly distressed, was directed not to give the breast until the following morning, and in the meantime to have the breasts drawn: the child was allowed nothing but barley water. During the night two motions passed, the first exceedingly fœtid; in the course of the day two more motions. On the evening of the 13th, the sutures were removed; on the 14th, a teaspoonful of castor oil was administered. On the 17th the child was quite well, the wound healed, &c., and I discontinued my visits. There has been no return of the hernia.—*Prov. Med. and Surg. Journal.*

OPHTHALMOLOGY.

CASE OF CONGENITAL OPACITY OF THE CORNEA. BY DR. P. W. MACLAGAN.

The wife of a private soldier in the Royal Canadian Rifle regiment was delivered of a healthy female child, (her fourth) which the author was informed was born blind. The state of the eyes, about fourteen hours after birth, was as follows: On neither was there the slightest trace of vascularity or purulent discharge; the left cornea was completely opaque; the sight was in the same condition on its inferior two thirds, but the upper third was clear, the opacity terminating by a tolerably fine edge. At first the narrator thought that he could perceive this edge to change its position, as the child's head was inclined to one side or the other, which led him to suppose the opacity resident in the aqueous humour; but this he found to be a mistake. Never having seen such a case, and not being able to hear of one, he was led to form an unfavourable prognosis: but in this he was agreeably disappointed: for in a few weeks the edge of the opacity on the right cornea began to thin off, to become less defined, and at length to recede, so that a part of the pupil could be seen on looking straight at the edge, while at first it could only be observed by looking from above. It was long before any change could be perceived on the left eye: but in January, three months after birth, it soon began to improve—the opacity at the upper part of the cornea becoming more diluted looking, and by degrees disappearing. At this time it was curious to observe the infant instinctively depressing the eye-ball when any bright object was held before it; so as to permit its image to fall through the upper portions of the cornea. When Dr. Maclagan was removed from that part, in March, there was only a small portion of the right cornea opaque, and the upper part of the left was tolerably clear, so that the child directed the eyes forwards, and not, as formerly, downwards. He has great hopes that the opacity may disappear entirely, or at least so far as to leave vision unimpeded. The author refers to some remarks on this subject which he has since read in Braithwaite's Retrospect. One thing he thinks may be drawn from all the cases recorded, viz. that the opacity has a great tendency to cure itself, if left alone. — *London and Edinburgh Monthly Journal of Medical Science.*

SPECIAL PATHOLOGY.

CASES OF VARICOSE VEINS OF THE FORE-ARM.

I have seen varicose veins of the forearm to a considerable extent. In the case to which I allude there had been inflammation of the median cephalic and cephalic vein. These veins had become obliterated, and, in consequence of their obliteration, the blood did not easily return from the forearm; so that the veins became varicose. A man was admitted into the hospital who had varicose veins all down the right arm, and to a considerable extent down the right side of the chest. He had difficulty of breathing, and cough. One day he felt as if he had received a blow on one side of the chest, and immediately a large abscess presented itself externally, as big as an orange, which had evidently made its way from the inside of the chest through one of the intercostal spaces. Immediately upon the appearance of this swelling, the varicose veins disappeared. The man died, and on examination of the body after death it was found that there was disease in the bronchial glands. Suppuration had taken place in them, and a large abscess had been confined in the inside of the chest, and pressed on the right subclavian vein, and this caused the blood to stagnate in the veins in which it had its origin, and which had in consequence become varicose. — *Sir B. Brodie's Lectures.*

Correspondence.

ON OXALATE OF LIME CALCULI.

SIR,—My attention having been directed to a letter signed "Inquisitor," inserted in your journal, which had hitherto escaped my notice in consequence of my being out of town, I beg in reply to state, that although small calculi, consisting of oxalate of lime, are usually smooth, still this does not preclude the possibility of their assuming the mulberry roughness characterising those of medium size. Speaking of this description of calculus, Dr. Prout observes: —"There is a variety of it remarkably *smooth* and pale coloured, and usually containing a mixture of the lithate of ammonia. Such calculi are always of small size; and from their colour and general appearance, have been termed the *hemp-seed* calculus *. In my paper it was stated that the specimen which I examined seemed more like a laminated fragment detached from the surface of a calculus; but I am not acquainted with any particulars to justify a conclusion upon this point.

In a lecture delivered by Dr. Houston of Dublin, a similar description of calculus is mentioned; and in a communication with which he favoured me, he states as follows:—

"I am well acquainted with your lectures in the GAZETTE, and also with the fact of your having therein stated, that the oxalate of lime calculus, when small, is generally of the smooth, hemp-seed form; and although such, no doubt, is the usual condition of this gravel, there are, I am sure, exceptions to this rule. The stone of which I spoke in my lecture, was determined by the usual tests, not only by myself, but also by Dr. Aldridge, to whom I gave a fragment, to be oxalate of lime. It was about the size of a grain of corn, and when broken into, presented a mass of crystals in their size and arrangement, like the prominences on the outside of the calculus. I thought to have sent it herewith to you, but have not been able to lay my hands on it.

"Within the last fortnight, I met with another calculus of the same outward form, only more round, and consisting of oxalate of lime, and the discharge of which was preceded by the same train of symptoms, only worse. The patient, an eminent lawyer, has had several such attacks, but never until now was a calculus looked for or noticed. It is not improbable that many small smooth calculi of the same nature may have been voided by these patients, and that it was only the rough ones which gave rise to symptoms that attracted notice by their severity."—Dated, 31, York-Street, Dublin, Jan. 17, 1845.

"Inquisitor" fears that the tuberculated forms of lithic acid may be confounded with or mistaken for oxalate of lime; and *vice versâ;* such a mistake is by no means impossible, and far from improbable, with those who depend solely upon external appearances or mere sensible characters. No one should rest satisfied as to the nature of calculus, or indeed any form of gravel or other urinary deposit, without observing its behaviour before the blow-pipe, and further verifying its nature by chemical proofs.

I am, sir,
Your obedient servant,
ROBERT VENABLES.

5, St. Vincent Place, City Road,
July 13, 1846.

ON THE USE OF PREPARATIONS OF IRON IN FEVER.

SIR,—Accidental circumstances having afforded me the opportunity of witnessing much general practice, and some severe cases of typhoid erysipelas having presented themselves to my notice, I can no longer refrain from begging a space in your valuable journal for the publication of a remedy which has appeared to me in many cases to be of essential service in the treatment of this formidable malady.

The medicine to which I allude is *iron*, and the formula I have adopted in its administration has been that of the Mist. Ferri Co. (Ph. L.), substituting, in the place of the carbonate of potash, the sesquicarbonate of ammonia, if called on to prescribe when symptoms of debility are urgent, and death by asthenia is threatened.

Some may feel inclined to attribute the success of this treatment as much to the stimulating effect of the ammonia as to any peculiar properties of the iron itself. Experience, has, however, convinced me that such is not the case, and that we have in the latter an agent capable of exerting great control over the disorder, and of improving the character of the constitutional symptoms attendant on the atonic form of the disease.

---

* Renal Diseases, &c. p. 573.

In stating also that the cases which have come under my immediate care have occurred for the most part in the ill-ventilated apartments of the dwellings of the poor, through which a current of air could not, by any amount of ingenuity, be directed in quantity sufficient for any salutary purpose; that in too many instances the constitution of the patient had been impaired and shattered by unwholesome and insufficient food, uncleanly habits, addiction to the use of ardent spirits; and that good attendance and careful nursing were not very conspicuously shewn nor mercifully bestowed on the part of the friends of the sick;—such facts must conduce much to increase our confidence in a remedy given in cases of the worst kind, and where probably the wine and brandy ordered for the patient were more frequently taken by those in health.

The iron may be safely commenced with as soon as any amount of gastric disturbance previously present has been removed, and when the febrile symptoms, by their change of character, betray an adynamic condition of the disease, and a sinking of vital power.

A dull or dusky colour of the eruption, and the temperature of the part affected not exceeding that of the surrounding healthy portions of the skin, are good indications for its immediate employment.

The presence or persistence of the symptoms of common inflammatory fever would of course contraindicate its use, and not until these have been removed have I ventured upon its exhibition.

Where there is exhaustion of nervous power, I have much faith in valerian combined with the iron mixture; and should there be a tendency to coma, or it be actually present, turpentine as an enema, and by mouth, as recommended by Dr. Copland, is truly valuable.

I much regret that a multiplicity of engagements at the time prevented my taking regular and daily notes of the cases under my care, so that in their history, and in the administration of the remedy I advocate, the *post hoc propter hoc* could have been made equally apparent to others as myself; but I feel certain that if the same success I have encountered results from a more extended trial of it, practitioners will have good reason to congratulate themselves, and console their patients, in the possession of a very excellent addition to their therapeutics in this disease.

I have the honour to be, sir,
Your obedient servant,
T. T. Tuckwell.

Petersham, July 19, 1846.

Medical Intelligence.

THE GOSPORT DUEL CASE.

Another trial has taken place during the last week at the Winchester Assizes relative to this duel. Lieutenant Hawkey, the party who was charged with having shot the deceased, surrendered himself to take his trial for wilful murder. The evidence on this occasion was the same as that given at the trial of Mr. Pym, and lately reported in this journal.[*] An objection was taken by the prisoner's counsel, that the deceased had not died from the wounds, but from medical treatment. This was overruled by the Judge. The prisoner was acquitted.

THE HERNIA INSURANCE CASE, ASHBY v. BATES.

We lately announced that this important case had been sent down for a new trial. A full report of the first trial has already appeared in our columns.[†] A verdict was returned for the insurance office, on the ground that the deceased had hernia at the time of the insurance, and the existence of this disease was not made known to the insurers. On this occasion the verdict has been reversed, and it is now in favour of the representatives of the insured. The evidence was on the whole very similar to that given on the former trial; and therefore we consider it unnecessary to reprint the report. The question being one of a purely surgical nature, both parties had taken care to provide themselves with medical witnesses. On the part of the plaintiff several persons were called, who were in the habit of attending to the deceased; and they deposed that until a short time of his death there was no tumor in the situation of the alleged rupture. Dr. Kerr, a witness for the office, deposed that the deceased had hernia before the insurance, but he did not mention this to the usual medical attendants of the deceased who were visiting him about this time and subsequently. Mr. Partridge, Mr. Mash (the operator), and several other surgeons, deposed that, in their judgment, the hernia, from the description and appearances, must have been recent. On the other side Mr. Coulson and Mr. Callaway were inclined, from the description and appearances, to regard it as of long standing. With this balance of opinions, the whole question turned upon whether Dr. Kerr might or might not have mistaken hydrocele, varicocele, or enlarged testis, for hernia, when he examined the deceased some time previously to the insurance of his life. Several witnesses admitted that he was labouring under some disease or enlargement of this part, for which he had worn a suspensory bandage; but there was no proof of his ever having worn a truss, or of his having been recommended to wear one. One point which appeared to weigh strongly against this witness's opinion, was elicited in the cross-examination. Within the last two years a patient had consulted him about a tumor, which he believed to be hydrocele, complicated with diseased testicle and hernia. He advised him to consult some eminent surgeon. Sir B. Brodie examined him, removed the water, and pronounced it to be hydrocele, and no hernia. He further admitted that he did not try the test of examining whether the tumor was transparent in the case of the deceased. Mr. Coulson, a witness for the office, said that the cases in which hydrocele might be mistaken for hernia, were those in which it was complicated with swollen testicle and disease of the scrotum; and farther, he would have been better satisfied had the test of transparency been used. Mr. Callaway said in cross-examination that with great respect for his brethren (physicians), he preferred the evidence of surgeons upon such points.

---

[*] Vol. xxxvii. p. 697.

[†] Ibid. p. 748.

He also stated that chronic enlarged testicle was a very important fact to communicate to the office. In this opinion all must agree; but as the office alleged hernia and the evidence failed to demonstrate the previous existence of this disease satisfactorily to the minds of the jury, the verdict was on this occasion against the insurers. This case is undoubtedly one of considerable importance to those who insure their lives. From the evidence elicited at the second trial, there cannot be the slightest doubt that the exact condition of the disease was not fairly and candidly stated to the insurers; and that all this painful and expensive litigation has been brought about by a want of candour on the part of the deceased, in filling up the queries and signing his declaration. Medical men will probably adopt different opinions on the question of the deceased having had hernia before the period of insurance, *i. e.* thirteen months before his death; but there can be no doubt that the question "whether he was free from disease or any symptom of disease, and in perfect health" was not properly answered; since the evidence established that he was affected with some tumor of the scrotum or disease of the testicle. The concealment of this chronic disease might not be regarded in law as material; but then the admitted difficulty of diagnosis in such cases, would have put the insurers on their guard, and the real nature of the disease would have been fully brought out by careful examination, and not left to be a mere matter of speculation.

REPORT FROM THE NATIONAL VACCINE BOARD.

Printed, 16th June, 1846.

To the Right Honourable Sir James Graham, Bart., &c. &c. &c.

Sir,—We have much satisfaction in reporting a considerable diminution in the prevalence of small-pox during the past year, and in being enabled, by extended experience, still further to confirm the conviction we have repeatedly expressed, of the protective influence of vaccination, whenever the operation has been duly performed, and the progression of the vesicle carefully watched and guarded during its advancement and decline. It is true that we have from time to time received complaints with respect to the failure of vaccine lymph; we have investigated such cases, and feel justified in stating as the results of our inquiry, that the imputed failures have not been due to any imperfection in the lymph itself, inasmuch as lymph taken from the very same source, and under the very same circumstances as that which had been condemned as inoperative, has proved completely effective in numerous other cases; but that the failures in question are to be referred to the operation of circumstances which are unfortunately wholly independent of the control of the Vaccine Board. We regard as erroneous the belief that the vaccine virus undergoes deterioration by being kept; in proof of which we are prepared to establish, by unquestionable documents, the striking fact, that lymph which had been conveyed to and from India has retained its protective properties wholly unimpaired, after a lapse of 20 years. We have the pleasure to announce the receipt of statements from New Zealand of the unqualified success of lymph supplied by our board, especially amongst the native population of that island. In conclusion we beg to state, that during the last year the National Vaccine Establishment has supplied no less than 158,531 charges of lymph; of which, independent of an increasing home consumption, a large proportion has been distributed to answer the constantly recurring demands of the army, navy, colonial and and emigration offices, and various stations in Her Majesty's possessions in every part of the world.

(Signed) John Ayrton Paris, M.D.
President of the Royal College of Physicians.
Samuel Cooper,
President of the Royal College of Surgeons.
B. G. Babington, M.D.
Senior Censor of Royal Coll. of Physicians.
G. Hue, M.D. Registrar.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

Friday, *July* 17.—C. O. West.—R. J. Squire.—W. L. Norris.—G. D. Haslewood.—W. H. Colborne.—G. C. Leathes.—J. M'G. A. T. Croft.—J. E. Wood.—E. Fletcher.—C. Nattras.—G. Peskett.—J. Nuttall.

Monday, 20.—H. Peskett.—W. S. Stiven.—G. Hawkesford.—J. Yates.—J. Kimpthorne.—G. W. P. Sparrow.—C. R. Matthew.—W. Knowles.—H. Hides.—J. Hooper.—J. J. Roughton.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

Thursday, *July* 16.—Charles Rooke Prance, Plymouth.—Benjamin Miller, India.—Walter Yonge, St. Ives, Cornwall.—Rob. Smart, Bristol.—John Foster, Sheffield.—Edward Cripps, Cirencester.—Robert Niblett, Gloucester.—Joseph Samuel Lavies, Westminster.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, July 11.

Births.		Deaths.		*Aver. of* 5 *yrs.*	
Males....	659	Males....	460	Males....	493
Females .	619	Females .	441	Females .	475
	1278		901		968

Deaths in different Districts.

(34 *in number;—Registrars' Districts,* 129. *Population, in* 1841, 1,915,104.)

West—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	144
North—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	181
Central—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ... .(Pop. 374,759)	158
East—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	196
South—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	222
Total	901

Causes of Death.

Col. a. Weekly Averages of 5 Summers; Col. b of 5 Years.

		A.	B.
All Causes	901	898	968
Specified Causes	900	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..	217	201	188
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c. of uncertain seat	108	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	152	155	157
4. Lungs, and other Organs of Respiration	203	227	294
5. Heart and Blood-vessels	28	23	27
6. Stomach, Liver, and other Organs of Digestion	114	87	72
7. Diseases of the Kidneys, &c...	11	6	7
8. Childbirth, Diseases of the Uterus, &c.	8	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	13	6	6
10. Skin, Cellular Tissue, &c.	1	1	2
11. Old Age	29	52	67
12. Violence, Privation, Cold, and Intemperance	16	26	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	3	Convulsions	30
Measles	10		
Scarlatina	25	Bronchitis	24
Hooping-cough..	32	Pneumonia......	30
Diarrhœa........	87	Phthisis	139
Typhus	28	Dis. of Lungs, &c.	1
Dropsy..........	11	Teething........	17
Sudden deaths ..	4	Dis. Stomach, &c.	9
		Dis. of Liver, &c.	9
Hydrocephalus ..	39		
Apoplexy........	23	Childbirth	5
Paralysis........	17	Dis. of Uterus, &c.	3

Remarks.—The total number of deaths was 3 above the summer and 67 below the annual average. The deaths from Zymotic diseases, with the exception of hooping-cough and diarrhœa, were also below the averages. The mortality from diarrhœa among young children still continues very great (deaths 87, and the fatal cases under fifteen years of age 76). In the West and North districts, the mortality was above the averages. In the others, it was below.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·66
„ „ Thermometer[a]............60·
Self-registering do.[b] ...... max. 113· min. 41·
„ in the Thames water. — 0 — 65·

[a] From 12 observations daily. [b] Sun.

Rain, in inches, 0·96: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 1° below that of the mean temperature of the month (61°). The extreme hebdomadal range in the self-registering thermometer was 72·°.

NOTICES TO CORRESPONDENTS.

We are obliged to Dr. R. for his letter on the African fever and the Eclair, but as we do not find that he has read or even seen the Government Report on the subject, and his opinions respecting the fever are based on what he has heard "in general conversation," we for the present withhold its insertion. Our correspondent admits that he does not know "any thing about the *particular circumstances* of the crew of the Eclair, and of the islanders," and yet asserts that it is "absolutely impossible, from the nature of things, that infection should be communicated from the crew of any vessel"! It may, in his opinion, be said, with much more reason, that the crew of the Eclair caught the fever from the islanders, &c. It must be obvious that nothing can justify such conclusions from one who has not yet made himself acquainted with the particular circumstances of the case of the Eclair. We shall be happy to insert any comments on the Parliamentary Report, but strong conclusions based on "general conversation," would neither satisfy our readers, nor serve in any way to elucidate the question at issue.

The remaining portion of Dr. Wardell's paper next week.

Mr. Tuckwell.—We shall be glad to receive the other papers referred to.

Lectures.

A COURSE OF LECTURES ON

ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

BY PROF. FARADAY, D.C.L., F.R.S., &c.

LECTURE IV.—May 16, 1846.

MAGNETISM.—*The loadstone or magnet—its action on iron—persistence of the power—points of action—attraction and repulsion—difference between the magnetic and electric attractions—communication of magnetic power—artificial magnets—the horse-shoe magnet—iron a conductor of magnetism—polarity—natural magnets—difference of property in soft iron and steel—Compound magnets—repulsion of similar, attraction of dissimilar poles—transference of power—analogy to electricity—only two active points—multiplication of active points by division—On magnetism by induction—influence at a distance—temporary magnets—magnetic curves or lines of force—the dip of the magnet—current of terrestrial magnetism—cause of the dip—points north and south—variation of the compass—magnetic polarity induced in iron by percussion—power of magnetism exerted through all substances which are not magnetic.*

THE part of our subject which will form to-day's lecture will be that position or condition of the power of which we have been speaking under the names of electricity and chemical affinity, which we find exerted by the substance called loadstone or magnet. I must ask you to-day to look at a distinct part of our subject, involving the properties of the loadstone, and to compare those properties with what you have already seen manifested by electricity, heat, and gravity.

Many of the experiments which I shall bring before you will be very old, and of a common-place kind. They will owe all their interest to the manner in which the power is exerted in producing the phenomena; and in fact, unless you follow me all through these lectures,—which I endeavour to make philosophical, by giving thought to them rather than a mere exhibition,—I shall not be able to convey to you the principles of the science.

First observe, that there are certain substances which we find, of which here are two or three specimens, that possess naturally and always a very remarkable kind of power, made evident to us when we arrange any one of these substances so as to move freely, and then examine it in relation to the others. To make this demonstration as simple as possible, I take a large basin of water, and, I think I can, by means of a smaller basin, float this piece of loadstone upon it. We shall then probably observe the motion on a scale so large that all may see the effect. Here is a piece of common stone, which has no effect; here is another, which we bring near it, and it will show some kind of action or other. You see it is traversing round the first basin. If I keep it from the side, so as to allow it its own natural action, I shall have the power of drawing the small basin with the stone in it from one side of the large vessel to the other. I will lay hold of it, and draw it back, not by contact or impulse, but by some peculiar action existing between the two stones, and which is very powerful in making one move by bringing the other near to it. If I hang up the stone by a fine thread, and so relieve it from the slight friction which the water causes, and then endeavour to examine it by this stone while suspended, you will see that whatever motion the stone may have by itself, this will affect it one way or the other. It is endeavouring to turn in an opposite direction. If I bring it near, you see it has some influence over it. Now, considering that we are examining a power of nature, it is necessary to know not only that this stone will turn that which is suspended, but we observe a strong and permanent condition of these stones by which they act on each other at a distance. There is no action to excite the power in the manner we carried it out in electricity, because these stones are always excited, as in gravity. The power remains in them, and has always been in them, during the thirty-three years I have known them as specimens belonging to the institution. The extraordinary development of power is a remarkable circumstance in the consideration of the properties of this stone. The way in which it exists at all times in a stone like this, is the most remarkable fact connected with magnetic force. No doubt the same is true of gravity and other powers, but exciting a power in a body, and finding it naturally existing in a stone, are different cases. We can excite this power by the current of electricity which I have already shown you. But observe the extraordinary way in which the power exists naturally in the loadstone. Further, if I mark this stone, and I will make it more visible by an indicator, I shall find that it has *points of action*. I will bring it nearer, and cause it to take a state of rest. One point of the stone keeps the opposite point of the suspended stone to it, and which I will mark at the particular point. There is a particular point in that stone which follows round and obeys this stone in whatever position I put it. I take the other side of the stone, and the action is changed. If I leave things entirely to themselves, I shall find that the point of rest or attraction will be exactly on the opposite side of that stone; the marked portion of the stone has been driven away, and the opposite side attracted. So that we have a power not only of affecting one stone, but another, and we get that kind of condition, that *duality* of power, which we have had occasion to observe in electricity, and which is so strikingly different from anything that we have in gravitation or heat. Although the stone possesses a certain power of this kind in all parts, yet we find an extraordinary difference in various parts; one part will attract, and another repel. If I turn it round carelessly, I drive the suspended stone about, and you would have a great many apparently accidental movements.

After finding this curious power of affecting substances by these stones, we come to another condition, which, perhaps, I shall best explain by referring to a few little particles of iron; and though my first experiments may be so small as not to be very striking in appearance, you will find them rise in power as we proceed. First of all, we look for indications of power in nature, and afterwards for the government of it by the laws that rule them. I will take up some pieces of iron, which are now sticking to the stone, not by the intervention of adhesive matter, but by virtue of the power which the stone itself possesses. If I take the opposite side, there are a number of pieces, a little bunch of iron particles, which cleave to that corner; so we get a mass of substances, which at first are indifferent—these nails, for example—attracted by this stone; and mark how, in obtaining this kind of force, how extraordinarily different it is from the relation which we saw in the other double power, or electricity. If it depended on electricity it would be discharged, but here we can keep the power in the iron nails, which could not be done in the case of electricity. It is a singular instance of the attraction of bodies at opposite parts by this reservoir of power, and you have the striking contrast that the power remains fixed in the matter, whereas if it were electric power it could be destroyed or neutralised by the slightest touch of a wet cloth or thread.

We now come back, and I must take you through steps, but striking steps, to magnetic phenomena. We come to experiments that prove a kind of conduction of this power. Here are two pieces of iron, which have no power over those particles of iron in the plate; at present they have no power over that heavy bar of iron lying on the table, but if I bring these in contact with the poles of a magnet, then the iron will attract as the poles do. I can now lift up nails by this iron which before was inert, and which, if I remove the power, will become again inert. I get an exertion of power in the iron to an extraordinary degree, which did not exist before. If I take the two poles (a horse-shoe magnet), apply them to the iron, and let them both exert action at once, I not merely get two bundles of nails, but by applying these two points I shall be able to lift up this piece of iron. We are now getting more striking phenomena, inasmuch as we are lifting iron by a force that resides in the stone, but which can be conveyed along the iron. Then there comes out a power in some degree common to other metals. Copper, platinum, tin, gold, or silver, have, however, no power of conveying the force of the magnet to a distance. Here we are struck with the dissimilarity to electricity. The more we get into nature, we find that the four or five powers are not only unlike each other, but all their effects and all their appliances show greater and greater divergence. The conditions for their action are endlessly multiplied. We have this natural magnet; we have a strong power residing continually there, inexhaustible, conveyable by iron, cobalt, and nickel, but not by metals at large. Hence you have the first general notion of magnetism; and you may go on to further results by a more close examination of the phenomena.

Before I leave this stone I must point out to you one most extraordinary property. That stone, now suspended, may perhaps be disturbed a little by the wind in the room, but nevertheless it tends to take up, as you will remark, a certain position, not dependent upon the string, but most likely even against a little twisting of the string, the ends of which towards me would, if the stone were in a still atmosphere, be in the direction I now point to (north and south). The long axis is in a different position. These two points are what we call the poles. There is the place where I find the most power of attraction and repulsion. The line which gets the power is like the position in which I now place my arm. It takes up that position in water, air, or glass, if it can move; a most extraordinary fact, to the consequences of which I shall by and by call your attention. It is very true that I have shown you in this little experiment a sort of power of communication, and perhaps I ought, therefore, to refer you to the old kind of magnet, where this power is made use of to draw out the magnetic influence of the stone. In this antique-looking box there is the same kind of stone. Here are the two ends that are most effective against the two pieces of iron which come below; and here is a part corresponding to what I have shown you before; so that in the one case you have a repetition of what you had in the other: there is the same kind of action in the natural as in the artificial magnet.

But we can go further than this. We are not limited to the power in the stone, and its conveyance along portions of iron that adhere to it, but we have a most extraordinary power of transference—and yet not transference—we have an extraordinary degree of the communication of magnetism from this stone to other bodies, which I must show you. If I take a piece of nickel, iron, or steel, I find all these substances will be more or less affected when laid alongside this stone. When I take them away, as you see here, they lose their power, as the pieces of iron did when they left the stone. But if it so happen that I take a piece of steel, and bring it against the magnet, I shall not at first find much effect. On the other hand, although the kind of power communicated appears to be very feeble, yet there is another mode of communication which is very striking. If I take this piece of steel and rub it well against the stone, always rubbing it in one direction, I get power upon these needles to a certain extent. Here is a piece of iron not magnetized, and it is possible that I shall, by rubbing this piece of steel against the magnet a good deal, at last make it have power of its own in attracting the iron. It attracts now, although but slightly. I would rather show the power of iron than anything else, because it is the first element of the communication of magnetic force. There is the iron moving. I have the power, though feebly, of drawing that piece of iron. Let us not despise this power; though it be small, it is the first manifestation of that force which we can bring up to an extraordinary degree of intensity. But we cannot do this with all kinds of iron. If I take pure soft iron, and rub it ever so much, although it receives power when near, it retains no power, when removed from the magnet, of pulling another piece of iron out of its direction, as that stone did. In this way we are able, by rubbing a piece of iron over these poles, and making a larger arrangement to get stronger effects. Now I can very feebly pull that piece of iron by the attraction which I have derived from the magnet; for I have brought all the power from the united poles to one point, and concentrated it.

Observe what happens; this piece of steel has been brought to the condition of that loadstone, and is in every part equal to it, for the loadstone could attract the iron the same as the steel; but the steel has now received a power which is natural to the stone. We have communicated from the loadstone to the steel, part of the peculiar power of the loadstone, whatever it may be, and it will retain it as the loadstone does from year to year, and can produce all the phenomena exactly as the loadstone has done. We can raise up the degrees of power beyond that of the loadstone by putting a series of small bars together, and so making a large or compound magnet.

I now take you to an artificial magnet—to these bars which are prepared for the experiment, and which will affect the needle as the natural magnet did. I take the point where the paper is doubled, the whitened end, and it attracts the other point, so that we get the same action as in the magnet, although in a better form, and we are capable of accumulating magnet upon magnet to any extent. See what happens when it is in this (the horse shoe) shape We not only get all the general conditions of power residing in matter, which, so far as electricity is concerned, is highly conducting, but we have a substance that enables us to examine it beautifully. But I take this magnet; and see what it effects. I here find repulsion. It looks electric in its general character; but if I take the other end, we have strong attraction, such attraction that it draws after it that bar, which is two pounds in weight. If we examine this a little further, we find, to our delight, that the attraction and repulsion are according to the same law—that like magnetisms repel each other, and unlike magnetisms attract each other: observe, that these two whitened ends, the same poles, repel each other. We never find more than these two kinds of power. Let us try by a third magnet whether this is the case. The white end repels this end; there is only attraction and repulsion; you see the white end repels that white end. We know these two are alike because they are like to a third, and these two repel each other. The other end will attract the white end, showing that it is in an opposite state to it. They are both magnetized, but opposite in force, judging by the direction in which it is observed; they are exactly like the electricity which we distinguished into the vitreous and the resinous.

Now we come to magnets of this kind, we are able to get power transferred most beautifully. I have here this horse-shoe magnet: I have first given it attraction and repulsion. Here is a magnet a little different in form, but it is the same as the other; it is nothing more nor less than bars bent like a horse-shoe, to bring the ends nearer each other. Here are seven, laid side by side, all having ends of the same kind, and we get compound results. We get both attraction and repulsion:—it lifts its own weight, which is very heavy; and observe the attraction between the different poles at the same time. Look at them as they stand here. Let us take a little piece of iron, and it will show what we require. Take two of these little bars, and suspend them to the same end or pole, they repel each other; if I put them close together they still fly open. Here you see most beautifully an analogy to electric power in a certain respect, and a difference. Like electricity they repel each other. If I take the other end the same result takes place;—the moment I put them together, and allow them to move, they are absolutely driven out, because the two forces are in the same relation to one of these poles or centres in the axis of the magnet. You will find this principle of the repulsion of like magnetisms, and the attraction of unlike, growing out more and more into beautiful phenomena, such as we have had occasion to witness in electricity. If I put the bars to opposite poles, it is impossible to keep them apart; they are now adhering by a kind of attraction, they swing together. If they were points, instead of being rough ends, they would fly together, because they are brought to one state by contact with each other. Then, as regards communication, observe the power we have in this case. Here are two pieces of iron and steel; and I have besides a third piece, of soft iron. They are not attracted at present, but observe how the power comes out, and how soon it is again taken away. If I touch this slightly, it becomes a strong magnet; if I turn it round only, I can, by nice touches, discharge it. You can retain the magnetism and discharge it at pleasure. I take it out and put it in by virtue of this the predominant force, the original power. This is a piece of steel,—observe the power we can give it, and how it retains it. On the whole, this which is soft iron attracts more powerfully when on the magnet, than steel does I can lift the magnet by this bar, although when touched it brings none away. So long as we use the soft iron in contact with the magnet, well and good; but the moment we bring it away, and look for any portion remaining in it. that is if the iron be pure, we find none. The more it passes towards the state of steel, the more we find left behind.

There is one point about these magnets, when they are made, to which I must call your attention, or you will not be able to appreciate the beauty of the phenomena which we shall come to hereafter. Observe, if I take a magnet like this, rotating on a pivot, and examine the bar by it, I shall find that the exhibition of power is only at the two extremities. There is one place at that end; then, if I go along the bar, and examine it by that point, I find now it becomes indifferent in the centre, until the other end of the indicator comes round, and I find a centre of the contrary force. At whatever part I examine it I shall find that the middle is quite indifferent; the needle is there parallel to the bar. What seems to be the point of activity is merely the resultant of an infinite number of points of activity throughout the whole of the bar. I will show you what I mean. Here is a piece of steel, which I can make a magnet, and which has now polarity at the two ends; at one end there is attraction, at the other repulsion. There is only one part which will attract, but if I break it I shall find two new attracting and two new repelling points. If I could put these two together, I should find the power would again disappear, as regards the action on the needle, because they are of opposite kinds.

A magnet presents two poles, but when it is broken there are four, and so, over and over again, every broken piece has in turn an attracting and repelling end. Here is the attracting end of this magnet: if I turn it round it is the same. We have in every bar an external structure which developes these contrary poles, whenever it is subdivided. Presently you will see how this bears upon the condition which causes the accumulation of opposite forces at the two opposite ends of the bar.

I must next take you to the very curious and striking exhibition of this power, which I may call the *inductive condition* of it; and which is so like what you have seen in respect to electricity as to convey to the mind of every one a perfect similarity of action in these cases. But I must choose the substances to act upon. Here is a piece of iron quite indifferent to any of those other tests of this kind of action. If I bring this piece of iron near a magnet, it is now active, not by contact, but merely by position; if I even hold it near the magnet, it is active. If I bring a nail or two I shall find them attracted, but this happens only when the iron is under the source of the power itself. Thus, if I carry it away from the magnet, you will find that the induction ceases, and it no longer attracts bodies. At a certain distance it supports a mass of iron, and at another distance it does not; the weight of the iron attracted at a given distance shows how great the power of induction is. It is a most extraordinary thing, that in all this transference of power we take away none of the power of the original. Magnetism is, in this respect, a degree above electricity. If I take this piece of steel, and magnetise it, I take no power from the magnet by giving power to the steel. You might say there must be a communication, but there is no loss from the original. I get a power in the new substance, but I do not take away the former power. You may make magnet after magnet, till you have a power by the accumulation of force far beyond the original source, and yet that original source may be proved to have lost none of its power. Now this kind of inductive action of which I speak has several points about it which are exceedingly curious; thus it affects all iron that is near it—all the iron articles on the table are influenced by it. The moment we adopt means to make it manifest, you will see the action on these bodies at a distance, and you will be able to compare it with the electric fluid, and see the course of the power in the inductive effects. Let us suppose, then, in all these cases of induction, the action is, some how or other, passing across the air in the space between the magnet and the iron, just like electricity when it exercised power on gold leaves of the electroscope at a distance. Although I shall hereafter show the phenomena on a larger scale, yet I wish to produce it here at once. Here are iron filings; I am sprinkling them upon the paper (a large surface of paper placed over the poles of a magnet) as uniformly as I can, leaving them to their natural force, for each of these particles can be as well submitted to the action of the magnet as a large piece. I hope you see that some change has taken place, and will remark the extraordinary way in which the filings are now arranging themselves in lines, or curves, over the paper; and this I shall hereafter have to treat of, when speaking of what we call magnetic curves. I beg you simply to observe the course of these curves, and mark the nature of the two poles, viz. the white and the black pole. If I take the two contrary poles, leaving that as it is, and turn one of these bars so as to have similar poles near each other, you will see the different effect produced. This is one illustration of the action of the magnet by induction.

The particles of iron are free to move, and manifest this by arranging themselves in concentric lines. You cannot fail to observe in every case that the power radiates from the two poles, as from centres of force; but where it is taken from two similar poles, the lines repel each other, whereas the lines of each pole run to each other. Here the attractive and here the repulsive forces are indicated at once by the form of the curve. If I had a flexible bar or rod of iron, and attached it to one pole, it would strive to take the line of this force in a direction to the other pole. The different particles of iron here unite, conjoin together, to form a flexible mass of iron;—thus you get the conjunctive lines of force in the one case, and the repellent in the other.

There is another striking and curious action indicating magnetic force, which I must show you, and which is shown best, not when the iron and steel are in a normal state, but when they are made magnets. I have here a little indicating magnet which is on an axis, and is free to move about in a vertical direction, for the purpose of taking up any position it pleases when submitted to this large magnet. If I take it and bring it to the middle of the bar, it is parallel, but if I then make it travel gradually along the bar, you will observe the beautiful manner in which the end of that indicating magnet bends to one pole by attraction, while the other end undergoes repulsion. The black end of the needle is attracted by the white end of the bar on the steel, and *vice versâ*; so that you get the indications of the two extremities. There is the repulsion of similar ends, because that end and this are of the same nature; and here is the attraction of different ends. But then you get this result, inasmuch as the bar has an effect at a distance upon the small indicating magnet. This magnet tells me where the centres of force are in this bar. If it were soft iron it would not show its position Here is a piece of soft iron: either end of the magnet will attract it. You see very easily the difference between soft iron and the magnet. The former has no influence over the magnet, through the want of that power of polarity which the magnet possesses. There are certain laws amongst us and about us acting on these indicators just as the bar did. It is not a mere mass of earth, but this globe of ours in all its relations is constantly acting upon the needle, and making it take a particular position or dip, as it is called, just as did the magnetic bar. But you must not suppose that that is the only position; there is another circumstance very important as regards the earth, which I will point out. The earth tends to bring it to nearly a vertical position. I have here a needle which I think is almost balanced:—I have endeavoured to deprive it of magnetism, and I think it is almost indifferent; but it is free to move in this direction or that, and to swing round. Let me make this piece of steel a magnet, and you will have a tell-tale which will describe what is taking place in the earth. For the earth is a great source of magnetic power. We can soon make the magnet. If I put it in its place, you see a double action taking place here; leave it to itself, and you will quickly see how it vibrates, swinging about with great power, and taking a direction, when horizontal, north and south. If I bring it into a vertical position I find one end appears heavier than the other; it is attracted downwards. We find every magnet, when thus left to itself, free to move on the centre of gravity, will take up a fixed position. We place the line which joins its two poles together in the position which that cord occupies in this room (a cord fixed in the magnetic dip.) When this needle is carried about, that is the inclination it will take, indicating the magnetic line of force which is in the earth. I could repeat by the earth what I have done here with either of these magnets, and I should find certain lines are running along, which the pole thus indicates, parallel to each other. As regards this part of the world, the line is going down to the earth, not to the north, but the true force is downwards in the course of the cord, as regards this room. I hope you will remember this result of the magnetic condition of the earth, because I shall want that in bringing you to terrestrial magnetism. I need not say how much we are indebted to this power of the earth for the mariner's compass. That is knowledge which I may remind you men received long ago. Here is a globe holding a magnet: if I could take this indicator over the surface of the globe we should find it affect the needle exactly as the common bar magnet did. The needle dips about, one end being affected at the north, and the other at the south pole, exactly the same as the indicator is affected by the bar, but in this latitude the north end dips down. It is the result of the magnetic force of the whole mass of earth. The position of the needle varies from year to year; but I will not trouble you with that. I shall want this fact to show how we get back electricity and light from the magnetic force of the earth, having respect to its universal action.

I think I must show you one or two experiments of the magnetic force of the earth, that you may be more aware of its presence than you might be by looking only at the dip of the needles. If I take this temporary arrangement and use a magnetic needle as an indicator, I shall be able to bring out certain effects of the earth, which I think will do more towards making you aware of the earth's magnetic force than you might otherwise be. To do that I shall operate on a common poker. Being soft, it will attract either end of the needle. If I give it a blow, while holding it in the magnetic meridian, it is no longer the case: this end of the poker will then repel one end of the needle. I will give you an experiment with one end. The knob of the poker, by striking it, has become an attractive pole, and the other end a repulsive pole. Go back, and observe first that this end of the poker has become a repulsive pole to that black end of the needle. Striking it in the magnetic dip you now find it strongly attractive. If I give it another blow, I shall now find it neutral, neither one end nor the other being magnetic; it has neither north nor south. It becomes instructive when you mark how I hold the poker. When I strike it I hold it parallel to the line of dip. It now points to the earth, and this end of the poker has the same quality as that end of the needle. I have made the poker, by its position, to represent the force of the earth, at pleasure. If I want to make it the reverse I strike it. This brings before you, very beautifully, what the magnetic force of the earth can do. In striking it I am holding it exactly perpendicular to the current of magnetic force, so that neither part shall be above or below that line. Now observe what a curious thing happens; the poker, at either end, becomes north and south without a blow, by mere position to the earth. At first this end repels, and I can drive it either way at pleasure. You have thus a most beautiful proof in kind, though not powerful, that the earth is really throughout a double centre of magnetic force, or rather a duality—that it has a northness and southness. That line I have set up is the line which the magnet will take when left to itself. It represents to us the true direction of the force as it goes through the earth.

One observation I wish to make is simply this—this power acts through all kinds of matter. If I take a magnetic needle like that, and bring the magnet here, I shall affect it, or repel the white end. If I put a sheet of copper between it and the magnet you will find the same thing take place. The copper does neither harm nor good; it does not intercept the power. I attract the black end by the white end; and the similar ends repel each other through the copper as readily as through air. If I place this block of marble between, no matter how great, there is the same result. Nothing intervenes to prevent the transference of this power except such bodies as are themselves highly magnetic. If I put iron here I get attraction; but the introduction of air, water, or glass, not being magnetic, does not interfere in the slightest degree with the exertion of the power of one magnet on another. Unless you had this fact explained to you, you would not understand the use we shall make of it by and by; but, no matter what mass of the earth intervenes—rocks, mountains, or buildings, nothing intercepts the exertion of this force, from place to place, except things which are themselves magnetic, like iron, cobalt, or nickel.

A COURSE OF LECTURES
ON
MEDICAL JURISPRUDENCE.

Delivered at Guy's Hospital,

BY ALFRED S. TAYLOR, F.R.S.

LECTURE VI.

Certain evidence of death before putrefaction—Cases of slow access of putrefaction — presumptions of murder — Determination of the period of death from the state of the body—Questions relative to the presumption of survivorship—Inferences relative to suicide and murder—Case of the Prince de Condé—Detection of criminals by reference to the period of death.

IN the last lecture some observations were made respecting the supposed dangers of premature interment, and it was remarked, that according to some medical jurists there is no certain sign of death except the occurrence of putrefaction. It appears to me, however, that there are circumstances upon which we may rely as indicative of death before the access of this process; and these when properly observed will render it unnecessary to keep the body until it has become offensive. The circumstances to which I allude are:—1. The absence of circulation and respiration; the stethoscope being employed if necessary. 2. The gradual cooling of the body. It is well in reference to temperature to employ a thermometer. The axillæ are the parts of the body which retain warmth for the longest period. 3. As the body cools, the supervention of rigidity attacking the members and trunk, not simultaneously but *gradually*: commencing with the lower jaw, and persisting for the longest period in the lower extremities.

This evidence is sufficient: we need not wait for putrefaction. It is as certain that these changes are the forerunners of this process, as that putrefaction itself is the forerunner of the utter destruction of the body. These phenomena must appear sooner or later in every dead subject; and no interment should take place until after they have passed away. I believe it may be safely said that there has not been a single instance of resuscitation after cadaverous rigidity has once taken place. During the raging of epidemics, if additional evidence be required, it might be obtained by exposing a superficial muscle to the galvanic stimulus. If the fibres do not contract, death is certain.

So much alarm exists in some continental states relative to premature inhumation, that to the cemeteries of many great cities, establishments are attached, containing apartments, kept at a high temperature, where the recently dead are laid out, and closely watched until putrefaction takes place. A medical practitioner is also at hand, with necessary apparatus for reviving those who may shew any signs of life. Such institutions may be very laudable, but they must be regarded as superfluous, where ordinary care is taken by the relatives of a deceased person. I have met with no account of any subject ever having been resuscitated in them.

One of the most singular cases on record of apparent death occurred but a few years since; and the fact that it was reported in Hufeland's Journal of Practical Medicine, appears to be a sufficient guarantee of its authenticity.

A young man died at the hospital of Paderborn in Prussia, who could not be buried until three weeks after he had breathed,—at least, to all appearance, his last breath. It was not until the *twentieth* day that the characteristic phenomena became manifest. The circumstances of the case were these. This young man had been a short time previously cured of a tertian ague, when he re-entered the hospital with some symptoms resembling phthisis, but by no means of a well-marked nature. In other respects there was no disturbance of his health. On the day he died, his eyes were suddenly opened, and for some minutes observed what they thought was an irregular beating of his pulse. Several small wounds, resulting from cauterisations, which had been made for the purpose of arousing him, suppurated the second, third, and fourth days. On the fifth his right hand turned back and closed; from the fifth to the ninth day there exhaled from the body an abundant perspiration. Towards the end of the ninth day, there appeared over a considerable part of the dorsal region serous bullæ, similar to those of pemphigus. The limbs remained perfectly pliant and flexible, although cold, and there was no appearance of respiration or circulation. On the eighteenth day the lips still retained their natural vermilion colour. For nine days, the forehead continued furrowed with vertical wrinkles; and all this time the countenance preserved an expression never presented in the dead body. The body was kept for nineteen days in a warm room: it exhaled not the least fetid odour, and there was observed on no part of its surface cadaverous ecchymosis. The emaciation was not very considerable. It was not until the twentieth day that signs of putrefaction manifested themselves.

This case shows that there may be conditions in which difficulties will arise in forming an opinion. The course of the phenomena were not those of death as usually observed: and no doubt can be entertained of the propriety of preserving a subject under such circumstances, until indisputable evidence is obtained from the access of putrefaction. Had this case fallen under ignorant nurses or attendants, instead of scientific and professional men, it is more than probable that the body would have been very speedily consigned to the grave. How many of such cases may have occurred it is impossible to say: but there are few who now die in a civilized country, that are not seen by medical practitioners; and the signs of death are commonly so well understood, as wherever any deviation from their ordinary course is observed, to lead to all proper caution in the disposal of the body.

Most of these doubtful cases of death are to be ascribed to the very slow access of putrefaction in certain subjects. A case occurred at Deptford in February 1844, in which it was supposed that a youth who had died suddenly had fallen into a trance. This was the view taken by the relatives, but most medical men who saw the body agreed that it was a case of real death, notwithstanding the occurrence of some unusual circumstances connected with it. The most remarkable feature in the case was the very slow access of putrefaction. A few days after death the features appeared to acquire a natural character, which is, however, by no means unusual. The friends preserved the body twenty-eight days, in the expectation that the deceased might return to life; but several medical men who saw it at this period agreed that decomposition had begun. It was not until thirty-five days after death that an inspection was made, and it was then found that the deceased had died from congestive apoplexy. It was, however, remarked that decomposition had not much advanced.

The period for which putrefaction may be suspended in a dead body, became a material question in a case of murder tried in America. A short report of that case is given by Dr. Beck, in his Elements of Medical Jurisprudence. I allude to the trial of a man named Desha for the murder of Francis Baker. The prisoner was last seen in the company of the deceased on the 2d November, 1824. The body of the deceased was found on the 8th of November in a sheltered hollow with the throat cut, several wounds on the head, and a wound on the chest. The body was a little stiff when first found, but it soon became pliant. There was no appearance of putrefaction either by the smell or by any alteration of colour. In two days after its discovery, it became much swollen, decomposed, and offensive. A fire had been kept in the room where it lay.

The main ground of defence was, that from the undecomposed state of the body, death must have taken place some days after the prisoner had been in company with the deceased; in other words, that the deceased could not have been dead six days, and therefore that the prisoner could not have been accessory to his death. The evidence on the question appears to have been partly general and partly medical. A Major Lacey deposed that the weather had been much as usual for the season of the year, and the nights frosty. He had known dead bodies lie a considerable time at that season without becoming putrid; but, on the other hand, a General Reed declared that he never knew anything of the kind, and, according to him, on the morning after the dead body was found, the deceased looked as if he had not been killed more than one night.

The question, however, is one of a medical and not of a military nature. Several medical witnesses were examined. One deposed to the number of the wounds and to the absence of putrefaction on the Wednesday; *i. e.* eight days after deceased was first missed. He considered that putrefaction might by circumstances be so long retarded, without its being necessary that the body should be frozen. Another said that there was a discharge of bloody water from the wounds, and that the principal wound on the throat had not been recently inflicted. A third stated, very reasonably, that the time required for putrefaction to take place depended on the weather, the manner of death, and other accidental circumstances; the loss of much blood might retard it, and he had known dead bodies lie throughout the winter without exhibiting any signs of it. The judge appears to have been strongly guided by the non-appearance of putrefaction. He said:—"It is difficult to suppose, that a body *at this or any season* of the year could have remained that long without exhibiting some symptom of putrescence; connect also that in two or three days after it was found, it did shew such symptoms as in that time might naturally be expected."

One other, and that a somewhat singular point, was supposed to indicate that the death had been much more recent than it was alleged to be on the hypothesis of the prisoner's guilt. When the body of the deceased was first found, the beard was observed to be quite short, and had the appearance of being recently shaven. In the interval between the Tuesday and the Thursday, when the face had become somewhat swollen, the beard appeared to have become a little longer. The counsel for the prisoner contended that the beard grew after death; and had the deceased been al six days before the discovery of his would have then been found elongated, chin would not have been smooth. ange actually took place, but only e discovery; therefore the death ave occurred at a period much more han that assigned. This ingenious was put an end to by some of the witnesses declaring that the growth beard after death was only apparent, s due to the shrinking and drying of ft parts. The prisoner was found a new trial was granted; he was ed on some technicality, and before th is reported to have confessed that etrated the murder.

case can really present no medico-ficulty to those who have made them-acquainted with the progress and ena of putrefaction. Even admitting ere were no anomalies in regard to pearance of this process in different s,—the low temperature at the season year, with the sheltered situation in the body was found, would suffice to t for its freshness after only *six* days. ation, under these circumstances, be slight: the skin would not become nd thus the beard might appear to be shaven. The removal of the body rm and dry atmosphere (a fact which dge overlooked), would not only t for the rapid access of putrefaction ts discovery, but for the apparent of the beard by the drying and re-s of the skin. There is nothing ing in this case, compared with that of y at Deptford; for the results were hat might have been anticipated. The shows the danger that might arise trusting such questions to the ex-e of majors and generals, or to any npetent medical witnesses.

estion arose, in a recent case, whether , aged four months, might be identified tranger who had only seen it once life, at so distant a period as *fourteen* fter death. It appears that a child en found dead by the roadside with injuries to the head. There was to believe that its body had lain there ght. This was during the month of A witness who saw the body after ment, declared it to be that of a child e had seen for a few minutes, living, rms of its mother, by the roadside, a t before. The attempt to identify ad by features, after the access of ction, is very liable to give rise to mistakes; and this would be espe-he case with the bodies of infants, in a difference of features is much less l than in adults. A medical witness that this child was remarkable for its e emaciation;' and that the body had undergone but little change since death. He therefore believed the witness to be correct. In such cases it would not be right to fix the period for the loss of the means of identity by the number of days, but by the degree to which decomposition had actually advanced. When the features become swollen and distorted from putrefaction, identity from them is destroyed.

It is sometimes exceedingly difficult to form an opinion of the reality of death in cases of recent drowning or hanging. Coldness and stiffness of the body in the former kind of death should not prevent the application of means for the restoration of life. One or two hours may elapse before signs of animation appear, and in one instance a drowned subject was restored only after eight hours and a half spent in the resuscitation. There can be no doubt that many drowned subjects are consigned to death owing to want of perseverance in the treatment,—the continued coldness of the body, and want of success after a few trials, being taken as sure signs that the individual is really dead. There appears, however, to be often a lingering vitality about such subjects. In one case, in an attempt to resuscitate a drowned person, who had been five minutes below the water, after a quarter of an hour the face from being pale became momentarily livid, but the efforts made to restore life were unsuccessful. In asphyxia from suffocation and hanging, some caution is required in pronouncing that the person is really dead, since it at once discourages the efforts of those who are endeavouring to resuscitate the individual.

Having, then, treated of the signs indicative of the reality of death, it remains for us to examine the application of these signs to the determination of the period at which that event probably took place.

Determination of the period of death. Questions of survivorship.—We may consider this part of the subject under two points of view: 1. As it relates to the dead body before the occurrence of putrefaction; and 2d, as it relates to it after putrefaction has begun, and before the soft parts are entirely destroyed.

In the first case, viz. between the moment of death and the occurrence of putrefaction, there are four periods, in which, according to Devergie, the phenomena are sufficiently well marked to allow of a medical jurist making use of them for his guidance. *First* period. This is characterized by the heat of the body being more or less preserved, and by a general or partial relaxation of the voluntary muscles. In such a case as this, after attentively considering all the circumstances which may have retarded or accelerated *the cooling of* the body, we may draw the conclusion that death has taken place from *a few minutes* to *twenty hours*, according to the degree of heat in the trunk, extremities, or axillæ, and the extent to which the muscular system is rigid. These are the extreme limits. It is very rare that the heat of the body is preserved for so long a period as twenty hours. In general it becomes cold within ten or twelve: but the power of drawing a more restricted inference can exist only with those who have had some experience in these matters. In this period the muscles are susceptible of contraction under the galvanic stimulus.

In the *second* stage, the body is perfectly cold, and cadaverous rigidity is well marked. The muscles are no longer susceptible of contracting under the galvanic stimulus. In such a case as this, death may be pronounced to have occurred in from *ten hours* to *three days*. It is impossible, in a general statement, to give a more restricted opinion than this; since there are conditions which may fully develope rigidity, and under which a body may become cold within ten hours or even less; and again, there are other conditions which may prevent the cooling of the body, and delay the occurrence, or prevent the disappearance of rigidity, for so long a period as three or even four days after death. The statement of from ten hours to three days embraces the average of cases. Here, again, in forming an opinion, the age, the kind of death, and the circumstances under which the body of the deceased may have been exposed, must be looked to by the practitioner.

In a case of suspected poisoning, which occurred to Mr. Duke, the body was found quite cold, and the upper and lower extremities rigid;—yet this woman was alive within 12 hours before her body was found. She was about 40, of spare habits, lightly clothed, and found lying dead on the stone floor of a kitchen in the month of October. The facts here negatived the suspicion of poisoning, simply from thus determining the time of death. In a case which was lately tried, the body of the deceased became cold and rigid in less than nine hours.

In the *third* period the body is perfectly cold: the members and trunk are pliant and entirely free from cadaverous rigidity. This condition having spontaneously ceased, the muscles no longer contract under the influence of the galvanic stimulus. Here the individual may have been dead from *three to eight* days.

In the *fourth period*, we have the commencement of putrefaction. The body becomes apparently larger, the face bloated, while the members and trunk are tense and elastic from the evolution of gas. At this time the body may have a somewhat high temperature, due to the chemical changes which are going on. The muscles ar affected by the galvanic stimulus. parietes of the abdomen assume a g hue, which slowly deepens. In thi death may be said to have taken p from *six to twelve days.*

In all these instances the subject sumed to have lain exposed in the phere at a mean temperature.

These different periods are some bitrarily fixed, and can only be looked affording approximative results, e the last. It is undeniable that a during the heat of summer, will und those changes in twenty-four hours, have been assigned by M. Deverg period of from six to twelve days. other hand, in winter, the same may not be fully developed, until lapse of fifteen or sixteen days. The of giving a safe medical opinion therefore depend on a proper estim all the causes which modify these p sive changes in the dead body.

Notwithstanding, however, the want of precision which medical must present, in investigations re the period at which a person died, proper to state, that approximative are often highly valuable; and whe on correct data, and corroborated b circumstances, they are always ad law, with the greatest benefit to ministration of justice.

Let us suppose that two per found dead in a room, and concernin death nothing certain is known: practitioner may be able to say, question should arise, whether before the other, or whether they di the same time. The determination question may have some influence disposition of property, or it may for the purpose of determining wh death of one or both of the parties to an act of homicide or suicide.

With regard to the disposition of the following case might arise. A and wife, the latter of whom may h considerable property specially se her by marriage, may be found de same apartment. The body of the may be cold and rigid, while the wife may be warm and pliant. medical witness hesitate to say wit presumption of survivorship rest withstanding the occasional occu exceptional cases, he would, it app be justified in answering, cæt. par wife had survived the husband. sequence of this might be that the wife had bequeathed by whole of her property to her yet the claimants on the part of band would not be entitled to r the property to the husband, and h him to the claimants on his part. se cases of presumed survivorship, igation between contending parties is arried to a degree which would hardly gined; but it is, comparatively speaking, re, that a medical witness has the means anding his opinion upon such well-ited data as those above stated. I ken this case of husband and wife as tration, but it would be by no means t to produce cases in which medical s have been required from circum- of this nature.

e following case of murder and sui- be murderer was clearly pointed out difference in the condition of the two when discovered:—

arch, 1836, a man and his wife had to rest as usual in the evening; but were not observed to make their ap- e the following morning, the neigh- became alarmed. They broke open d-room door, and discovered the d and wife lying on the bed, dead, eir bodies covered with blood. The 's head was nearly severed from her y a deep incision in the throat; besides there was a wound under the chin, other on the side of the head. The throat was also severely cut; and the with which the wounds had been in- was found on the bed, within a short of his right hand, as if he had en- red to throw it from him, and had , the attempt. The body of the wife ld and rigid, that of the husband yet These facts showed, with some proba- hat the wife must have died instantly, ust before the wound was inflicted by sband on himself. The nature of the

as usual, about 10 o'clock on the night of the 26th August. His body was discovered hanging in the manner stated, on the morning of the 27th, at 8 o'clock. The body was *cold*, and the lower extremities were *rigid*; it was also partly undressed. Now, as in asphyxia from hanging, the warmth of the body is usually considered to be preserved longer than under common circumstances, *i. e.*, from sixteen to twenty-four hours—before which period rigidity is seldom complete—the medical examiners inferred from the body of the deceased being cold and in part rigid, that this was a sufficient proof that the duke must have died very soon after he had retired to his chamber the previous night. Even this would have only given *ten hours* for the cooling and rigidity of his body to take place—a sufficiently short period of time. It was, therefore, rendered in the highest degree medically probable, that the hanging took place about ten o'clock, or very soon afterwards. From ten until twelve o'clock, it was proved that there were numerous attendants moving about contiguous to the duke's apartment, and who must at that time have heard any unusual noise or resistance which the duke would most probably have made against the attempts of his supposed murderers. But no noise was at that or any time heard in the duke's apartment, and the presumption of homicide was therefore strongly rebutted. Had the body been found warm, some doubt might have existed as to the time of death; but the evidence afforded by its being found cold, was such as fairly to allow a very positive medical opinion to be expressed. It was declared to have been an act of suicide.

A case of suspected murder occurred in France in 1832, which will serve to throw rigidity. The deceased was dressed in her usual clothes. On examining the body, the following appearances were found :—

1. Cadaverous ecchymosis ; superficial, extending over the posterior parts of the trunk and limbs. 2. At the upper part of the neck, and immediately below the inferior maxillary bone, ten recent and well-marked excoriations. Five of these excoriations were situated on each side of the neck, and they varied slightly in form and size ; the whole of them were more or less ecchymosed, especially those on the right side. The four outer depressions on each side were close to each other, while the fifth depression was at some little distance from them, so as to approach nearly the medium line of the neck. 3. There were one or two other trivial marks of violence on the person.

On inspecting the cavities, the vessels of the brain were found highly injected, and the whole of the organ appeared congested with blood. The lungs were gorged, and this engorgement was greater around the large trunks of the pulmonary vessels. The right lung was more congested than the left. The abdominal viscera were scarcely cold. The stomach contained food recently taken before death. The gall-bladder was empty. The other organs presented no particular appearances.

The conclusions from this examination were :—1. That death had resulted from the circulation and stagnation of venous blood in the brain and lungs. 2. That the deceased had perished from asphyxia by strangulation. 3. That the number and situation of the marks on the neck, coupled with the position in which the body was found, proved that the deceased had fallen by the hands of others. 4. That the deceased could not have been dead for a period *longer than from fifteen to twenty hours* previous to the inspection (1 o'clock, P.M. March 6, 1832) ; *i. e.* that the murder must have been perpetrated between the hours of five and ten o'clock in the evening of the previous day (March 5.)

The magistrates, to whom this report was presented, finding that the period assigned for death by the examiners was irreconcileable with the depositions of several witnesses, and inconsistent with many circumstances which tended to prove that the murder must have been perpetrated in the night intervening between the 4th and 5th of March (and therefore twenty-four hours later than the time assigned), referred it to MM. Ollivier and Devergie, requesting to be informed whether the opinion was justified by the facts. It was further stated, that the female, when discovered, had on a flannel as well as a cotton dress.

MM. Ollivier and Devergie considered that the opinion respecting the period of death could have been based only on the fact of the abdominal viscera not having entirely lost their warmth : but in opposition to this, they argued, that in death from asphyxia warmth commonly remains for twenty-four or thirty-six hours after death ; and that in this instance the body was so covered as to favour the retention of heat. Moreover, the discovery of half digested food in the stomach proved that that process was still going on at the time of death,—a condition likely to preserve the warmth longer in the viscera.

These, then, were circumstances which, in the case of the deceased, tended to the retention of warmth longer than in ordinary cases of asphyxia.

Besides, the deceased's body was in a state of rigidity ; and it is well known that in asphyxia this is an appearance which is not in general witnessed until many hours after death. The presence of merely a slight warmth in the abdomen, so far from proving that death could not have taken place longer than from fifteen to twenty hours prior to the inspection, absolutely proved the contrary ; since, had death been so recent, not only the abdomen, but the greater part of the trunk, would have been warm ; and the members most probably not yet in a state of rigidity.

The medical jurists to whom the case was referred declared it to be their opinion, that the inference drawn by the examiners was not borne out by any of the medical facts observed ; that death had probably taken place for a much longer period ; and certainly for the time at which the circumstantial evidence rendered it probable that the deceased had died. The present state of science did not allow them to specify any precise period for the death of the party, since the state of rigidity often lasts for a period of two or three days.

The magistrates, however, were more in want of a negative than an affirmative opinion ; therefore that expressed by MM. Ollivier and Devergie was sufficient for the proper fulfilment of the ends of justice.

Many other cases might be mentioned, in which an attention to the changes that take place in the recently dead body has tended to throw great light upon questions relative to homicide, suicide, or accident ; but these will suffice to show, that although precise opinions cannot be given on these occasions, much assistance may be rendered by a medical jurist in the elucidation of an intricate case.

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

Many remarkable and important cases of various forms of disease affecting the structures of the pulmonary artery may be found scattered through the pages of our medical literature; and, recently, there have appeared several valuable memoirs illustrative of particular organic lesions which the tissues of that vessel are liable to undergo. Among these the essays by Mr. Paget in the Medico Chirurgical Transactions, and the papers of Dr. Craigie and Dr. Ormerod in the Edinburgh Medical and Surgical Journal, deserve especial mention. Still I am not acquainted with any work in which the student can meet with a general and comprehensive history of the principal diseases that are known to affect this artery, or to which the morbid anatomist who happens to observe remarkable deviations from the natural condition of the vessel can at once refer with the probability of being able to compare his cases with similar recorded instances.

The pulmonary artery appears to be constructed in a manner which renders it far less liable than are the systemic arteries to undergo extensive and conspicuous organic changes: and the manner in which post-mortem examinations of the thoracic viscera are usually conducted—that of removing the heart and lungs separately from the body, and of making vertical incisions through the pulmonary structures—appears to have always led to a want of caution in examining the entire tract of a vessel thus mutilated and divided. From this it has resulted that the diseased conditions of this artery have remained, upon the whole, matters of neglected inquiry: morbid anatomists have very rarely been at the trouble of systematically examining its whole extent in cases of pulmonary and cardiac disease, and hence indolence, rather than demonstration, has led to the establishment of a general but most erroneous belief that the lesions to which this vascular tract is prone are less frequent and less important than those which are continually observed in the structures of the systemic arteries.

A practical investigation of the diseases of the vascular system, pursued in a large public institution during a period of more than ten years, has enabled me to collect a considerable number of original and, I venture to think, important memoranda of the abnormal conditions to which this artery is liable. Some remarkable instances of rare lesions of this vessel have also occurred in the practice of my friends, who have obliged me with a sight of the diseased structures, and have furnished me with narratives of the cases. In the following pages I have endeavoured to combine my own facts with those which have occurred in the experience of others, in such a manner as to present, in a condensed form, the outline of a history of the principal diseases of the pulmonary artery.

Interesting as I venture to believe the observations thus collected will prove to the scientific investigator, I should still not have felt willing to undertake the task of eliciting and recording them, did I not hope to deduce from their correlation results of greater importance than those which usually accrue from the discussion of any merely anatomical question; and if it did not appear that such an inquiry would, in no small degree, tend to advance that great purpose which must ever be the final object of all pathological research—the treatment and mitigation of disease. In the following pages I shall lose no opportunity of applying the facts adduced to the illustration of certain definite and leading principles which I believe it to be most necessary to establish for the proper therapeutic management of diseases of the heart and lungs.

Before entering upon the main subjects of the present inquiry, it will be necessary to devote a few observations to some leading points in the

Normal Anatomy of the Pulmonary Artery.

This is a vessel *sui generis*, partaking almost equally of the structural characteristics of the arteries and the veins; resembling the former in the character and arrangement of its principal tissues, and the latter in its pliability, thinness, and dilatability.

As the distance which the blood has to be propelled through the pulmonary vessels is short compared to that which it traverses in permeating the extended tract of the systemic arteries, and as the entrance of the venous blood to the lungs is greatly aided by the respiratory movements, the distending power which the right ventricle ordinarily exercises upon the pulmonary artery is considerably less than that of the left ventricle upon the aorta. Still, the muscular force of the right ventricle, in a state of health, is by no means inconsiderable, and the shortness of the tract of the pulmonary artery, together with the frequent causes of transient obstruction to which it is almost necessarily liable, render it requisite that it should be constructed in a manner which will at once enable it to escape rupture, to undergo considerable distension, and to return to its natural condition immediately after the cause of over distension shall have ceased to operate.

It is evident that a vessel possessing the comparatively rigid and inelastic structure of the aorta would, if occupying the position of the pulmonary artery, very shortly become inefficient under the frequent causes of temporary and permanent obstruction to which that vessel is exposed—its strong and closely knit fibres would soon become stretched and inelastic, its inner tissues would become thickened and loaded with fibrinous and bony deposits (the necessary concomitants of great dilatation in the systemic arteries), and, in a few years, aneurism, or laceration of its coats, would almost certainly result.

Hence we find that the pulmonary artery is constructed in a manner which renders it capable of long resisting the injurious effects of over-excited cardiac action and pulmonary obstruction. The recurved form of its branches in great measure prevents the impulse of the ventricle from being too powerfully exerted upon the minute vessels of its subdivisions; and the thinness, pliability, and tenacity of its structures, fit it to receive powerful shocks with impunity, and to suffer extraordinary distension without at once becoming permanently dilated.

I have been at some pains to determine the relative dilatability of the aorta and the pulmonary artery, and have found, by accurate measurements, that the ascending portion of the latter is very far more dilatable laterally (or when its tissues are stretched in the direction of the fibres of its middle coat), than is the latter at the commencement of its arch; while, although the structures of the pulmonary artery are somewhat more extensible in a vertical direction than are those of the main systemic trunk, the difference in this respect between the two vessels is far less considerable. The aorta, on the contrary, although less yielding in every way than the pulmonary artery, is more extensible in the vertical than in the horizontal direction.* This might be anticipated from our knowledge of the anatomical relations and the functions of the parts. The entrance of the blood to the pulmonary artery being, in great measure, due to the action of the lungs, and the right ventricle possessing, under ordinary circumstances, a very moderate degree of muscular power, the vessel does not require to be possessed of remarkable extensibility in the line of its axis, but the frequent delays to which the circulation through the lungs is liable render it absolutely necessary that it should be capable of great lateral distensibility, so as to perform, during brief periods, the office of a temporary reservoir for the blood, which can neither return to the ventricle, nor gain a ready transit through the lungs. The aorta, on the contrary, is, under ordinary circumstances, far less liable to causes of temporary obstruction. During periods of great muscular effort, &c. the passage of blood through its branches is somewhat delayed, but this retardation occurs to a less degree, and operates within a more extended system of vessels, than is the case in the pulmonary artery; hence remarkable dilatability is not requisite in the aorta;—on the other hand, however, the impulse of the powerful left ventricle acts with great extending force upon the whole aortic tract, and therefore it becomes necessary that the tissues of this vessel should possess great elastic extensibility in the vertical direction.

In a previous essay* I have described the beautiful arrangement of a structure situated between the epithelial lining and the elastic coat of the arteries, and which appears to be in great measure designed to assist them in resisting undue vertical extension. This structure appears to be far less fully developed in the ascending pulmonary artery than in the aorta, and the latter vessel seems to owe its vertical elasticity principally to the tissues which are disposed upon the exterior of its middle coat. As I shall endeavour to shew, it is probably to the rudimentary development of the sub-epithelial fibrous tissue in the ascending pulmonary artery, that the comparative rarity of semi-cartilaginous and earthy interstitial deposits in this portion of the arterial tract is due.

The question of the *comparative size of the pulmonary and aortic orifices* has occupied the attention of many anatomists, the results of whose researches have been so greatly at variance as to leave the matter altogether in an undecided position; one or two authorities declaring that the pulmonary ostium is decidedly narrower than the aortic; while the majority concur in the opinion that the former is naturally the wider of the two.

---

* In one of my experiments, I took a square portion of the aorta of a young adult from the sinus of Valsalva, and another portion, of precisely equal dimensions, from the ascending pulmonary artery (their structures were perfectly free from any morbid change), and I found their relative dilatability and extensibility to be as follows:—Taking the transverse and longitudinal measurements of both portions as 27, the *lateral dilatability* of the *aortic portion* was represented by 41½; that of the *pulmonary* by 47. The *longitudinal extensibility* of the *aortic* fragment was equal to 43; that of the *pulmonary*, to 45.

* Account of the Sub-serous Membrane of the Aorta, Guy's Hospital Reports, No. 10.

To ascertain the true natural relative size of these two vessels is certainly a matter of no slight difficulty. It will be found comparatively easy to discover the dimensions of the aorta, which may be readily measured without producing any extension of its tissues, but it will be seen that to take an accurate measurement of the width of the pulmonary artery, without stretching its thin and yielding coats, is a piece of manipulation which requires considerable tact and caution. It is almost impossible to measure this vessel either by compasses, a rule, or a cylinder, without either allowing it to remain in a partially collapsed state, or producing an amount of dilatation which, of course, does away with the accuracy of the experiment. In measuring the respective width of these vessels in recent subjects a fallacy is also liable to arise, from the fact that, under ordinary circumstances, the right cavities and vessels of the heart are, at the moment of death, in a state of extreme distension, while those on the left side are comparatively empty,—under which conditions the pulmonary artery is, in a great measure, prevented from undergoing that degree of tonic contraction which is known to occur after death in the whole of the systemic arteries. Lastly, it appears to be certain that, in by far the larger number of individuals, the temporary obstructions to which the pulmonary circulation is always liable, produce a certain degree of permanent dilatation of the artery, which slight dilatation, notwithstanding the exceeding frequency of its occurrence, the early age at which it is often established, and the unquestionably healthy condition of adjacent parts with which it is generally accompanied, must, in reality, be considered as a decidedly abnormal and morbid state.

I have taken exact measurements* of four pulmonary arteries selected with the greatest caution from young well-formed adults (three males and one female), whose deaths had been produced by causes not directly influencing the cardiac and pulmonary functions: and in whose lungs and circulatory apparatus no disease could be discovered. In these specimens I found the average measurements of the pulmonary orifice to be as follows:—Circumference—immediately above the valves, 32⅛ English lines; directly below the valves, 38¼ English lines.

In eight cases, the average measurement of the upper (and narrowest) portion of the aortic orifice was also within a very small fraction of 32⅛ lines. The average width of the lower part of the aortic orifice is 36½ lines—nearly two lines less than that of the corresponding portion of the pulmonary artery; but it is evident that in measurements of this kind, the width of the *narrowest* part of the outlet is the point of most importance, as it alone represents the dimensions of the orifice, by which the blood has exit from the ventricle. The greater width of the lower part of the pulmonary ostium must not be regarded as the effect of dilatation—it is due to the peculiar form of the right ventricle, which is naturally rather broader at its upper part than the left. From the caution which I employed in choosing these specimens with reference to the stature, age, and cause of death of the individuals—rejecting many scores of specimens to which more or less objection might have been made on account of the height of the subjects, the causes of dissolution, or the engorged or otherwise faulty state of the lungs—I have no hesitation in stating my conviction that the size of the two arterial outlets of the heart is naturally the same, and that every departure from this correspondence must be regarded as a diseased condition.

I have made another set of observations of this kind in subjects who have died from chronic disease entirely apart from the heart and lungs, in whom the bulk of the circulating fluids had been long diminishing, and who had been compelled to remain in a state of complete inaction for long periods previously to their dissolution. In subjects of this kind (providing there has been no considerable previous lesion of the heart and its appendages) the measurements of the aortic and pulmonary outlets are found to be either precisely identical or varying in an exceedingly slight degree. Still it is undeniable that, in the larger proportion of adult hearts, the measurement of the pulmonary artery above its valves more or less exceeds that of the aorta in the corresponding situation. But, although this disproportion is so frequent, it is certainly unnatural. The more healthy the entire pulmonary and cardiac apparatus is, the more nearly will the upper ostia of the two great arteries be found to correspond in width; and I have long felt no hesitation in deciding, wherever (independently of morbid thickening, or any other visible structural change) the pulmonary artery, immediately above its valves, is found wider than the aorta in the same situation,—that the former vessel is unduly dilated,—and, on the contrary, when the pulmonary is the narrower of the two (its tissues retaining their elasticity), that the mouth of the aorta has become morbidly stretched. *The relative dilatability* of the upper and lower portions of the pulmonary and aortic ostia is also a matter of some anatomical interest. I have found the former artery, measured above the valves, to be dilatable to 43½ lines,—directly below to 46, while the greatest dilatability of the upper aortic ostium is 43, that of the lower 39½ lines. Hence, the upper ostia of the two vessels are nearly equally dilatable; but although, as in the aorta, the lower portion of the pulmonary orifice is the wider, the pulmonary artery differs from the aorta in presenting naturally a greater disparity in its width below and above the valves, and also in having its lower ostium more extensible and more yielding than the upper. This is evidently attributable to the fact that while the lower margins of the aortic valves are attached to a strong and almost unyielding fibrous structure, an exceedingly thin fibrous expansion exists in the right ventricle beneath the pulmonary sigmoids. Under circumstances of long-continued distension, there is, however, occasionally observed considerable thickening and rigidity of the sub-endocardial fibrous tissue at this spot.

---

* The mode in which I have always been in the habit of measuring the orifices of the large arteries, and which I believe to be the least susceptible of error, is to lay the vessel open by a vertical incision, without removing it from the heart, or subjecting it to any rough manipulation, and to place across the part of which it is required to obtain a measurement, a piece of common twine which has been previously sufficiently wetted to enable it to adhere to the whole inner circumference of the artery: when the string has been accurately applied in a direct line across the vessel, its ends are cut off on either side precisely at the spot where they touch the divided edge of the middle coat of the artery, and the measurement of the portion of string thus separated is immediately taken. This, of course, precisely represents the width of the vessel to which it has been applied.

These apparently trivial minutiæ are, in reality, of considerable importance, and for this reason—that the size of the heart and its vessels of course varies exceedingly in different subjects, according to the stature, age, sex, and thoracic development of the individuals, and the quantities of their circulating fluids;—hence, although correct averages may be drawn from very accurate measurements of perfectly well-formed hearts, it will rarely happen that the size of any heart will be found to correspond precisely with the standard. And, indeed, it is clear that neither departure from, nor accordance with any fixed standard can alone be regarded as a certain indication either of the healthy or diseased condition of a part. Thus a vessel, which is considerably below or above the average size, may, in reality, be in a perfectly healthy condition; while another the width of which precisely corresponds with the standard, may have undergone a very considerable amount either of dilatation or contraction. Hence the necessity of observing and comparing the *relative* width and dilatability of the two great arteries, as well as of the upper and lower portions of their orifices. It is scarcely of so much importance, even, to remark whether the bulk of the whole cardiac apparatus be large or small, as to observe how far the relative width and dilatability of its several portions have been preserved. A heart in which this relation persists, can scarcely be in an inefficient state; while, in a diseased organ, the relative proportions of the orifices, and their due elasticity, are rarely if ever maintained.

The researches of Hasse with regard to the relative size of the aorta and pulmonary artery, have led that observer to conclude with Bizot, that the latter is naturally wider than the former; still one or two of his observations are strongly confirmatory of my own views. It has been stated*, that the relative disproportion between the two arteries is discoverable as early as the seventh year, and it is certainly true that this morbid disproportion may be established at almost any age. M. Hasse, however, observes that, "in children the orifices of the two arteries continue equally capacious until the sixth or even the tenth year,"—a very strong evidence that any consequent disparity must necessarily be the result of unnatural dilatation.

M. Hasse observes, that, as life advances, the progressive enlargement of the two arterial orifices of the heart differs; both increase equally until the meridian of life, but the aortic orifice enlarges more rapidly in advanced life than that of the pulmonary artery, so that, in old persons, the latter is even narrower than the aorta. This variation M. Hasse has met with earlier in males than in females, (in the former from the 50th year upwards, in the latter not till after the 60th). In a still later period of life it no longer applies†. I have found that, in persons above the age of 60 years, there is always considerable dilatation of both arteries, but that their relative proportions vary in great measure according to the nature of the causes which have occasioned death. Thus, in an extremely enfeebled woman, who died of bronchitis at the age of 65, the circumference of the pulmonary outlet exceeded that of the aortic by three lines. On the contrary, in two men who died of malignant disease at the respective ages of 74 and 77, the circumference of the aortic ostium exceeded that of the pulmonary by one and a half and two lines. But, in a man who died of gangrene in his 89th year, although (as in the other cases) the tissues of the pulmonary artery and ascending aorta appeared almost entirely free from any other change than loss of elasticity, the lower portion of the orifice of the former measured 45 lines, while that of the latter was only 39 lines in circumference.

---

* Anatomical Description of the Diseases of the Circulation and Respiration. By C. E. Hasse. Translated by W. E. Swaine, M.D. Published by the Sydenham Society, 1846.

† Cycloped. of Anat. and Physiol.; Art. Heart.

I noted it as a remarkable fact, that, in this aged person, the narrowest portions (which were here the lower ostia) of the pulmonary artery and aorta had respectively become dilated very nearly to the utmost extent to which I have shewn that these parts of the vessel are naturally capable of being stretched. It will be found in the pulmonary artery, as in the aorta, that in an exact ratio to the degree in which any part of the vessel has become permanently dilated, is the loss of elasticity in that portion of the tube: thus we have seen that the natural measurement of the lower ostium of the pulmonary artery is 38¼ lines, and that it admits of being stretched about eight lines: hence, in adult males, where this portion of the vessel is 41 lines in circumference, it may be premised that it will probably not admit of being dilated more than four or five lines; and, in cases where it is 44 or 45 lines in circumference, it will be found to have nearly or entirely lost its elastic properties.*

In cases where the upper or lower portions only of the two great arteries are much dilated, life may be considerably prolonged; but it is probable that, whenever both the upper and lower portions of their cardiac orifices become permanently dilated to the greatest extent which the natural yielding of their structures is capable of admitting—even independently of any very apparent change in their tissues beyond mere loss of elasticity—life begins to be held on an exceedingly frail tenure. It is true that, in a few cases, the widest part of the pulmonary orifice has been found to exceed its natural measurement by an inch or more, but the subjects of this lesion have invariably died from failure of the heart's action. And it can scarcely be doubted that a considerably less degree of dilatation than this is sufficient to occasion sudden death in consequence of any cause which tends to produce over-distension of the ventricles.

This question appears to be by no means undeserving of further investigation, especially as illustrative of the immediate cause of death in extreme old age, and in cases of long-standing disease of the heart and lungs.

The following are the principal subjects which will be considered in the succeeding observations:—Congenital Irregularities in the Mode of Origin and Distribution of the Pulmonary Artery; Unnatural Dilatation and Contraction of its Canal; Inflammation; Pulmonary Apoplexy; The causes which determine the deposition of Clots in the Pulmonary Artery; The Diseases of its Valves; Ulceration and Laceration of its cardiac and pulmonary divisions. The Pathological Condition of the Ventricles, especially of the Right, in cases of Disease of the Pulmonary Artery and Lungs; Symptoms and Diagnosis of the Diseases of this vessel; a Sketch of the General Principles of Treatment which it is necessary to pursue in these and other forms of Organic Obstructive Disease in the Cardiac and Pulmonary Apparatus.

Upper Stamford Street,
July 1846.

[To be continued.]

MALPOSITION OF THE KIDNEY.

In a recent number of the Philadelphia Medical Examiner (Dec. 1845), Dr. W. B. Driver describes a peculiar abnormal position of one of the kidneys in a subject brought for dissection (unfortunately the age and sex of the individual are not mentioned). The left kidney was situate in the pelvis, immediately below the promontory of the sacrum. It was much smaller than the kidney of the right side, and derived its artery from the common iliac of the *right* side, about half an inch below the bifurcation. A deep sulcus was formed upon its surface for the passage of the renal artery. The convexity looked upwards, and the pelvis was much distended, owing, perhaps, to the gravitation of the urine (the course of the ureter is not alluded to). The distribution of the renal artery is very remarkable in this case, arising as it does from the common iliac on the *right* side. Another peculiarity in the distribution of the branches of the abdominal aorta was, an arterial branch, corresponding nearly in its origin to the inferior mesenteric, but which took its course along the lumbar vertebræ without giving off any branches until it dipped down behind the bladder.

[Had the points to which we have referred above, together with some information respecting the position of the left renal capsule, and the real distribution of the abnormal branch from the aorta, been carefully given, the value of this case would have been much enhanced.—Ed. Gaz.]

---

* When any vessel is found dilated, if its standard capacity be known, the loss of elasticity in its tissues may generally be taken as an indication of the degree in which its calibre has become increased. But this test does not, of course, hold good after the canal has become permanently widened beyond the extent to which it is *naturally* dilatable. Whatever slight amount of elasticity varicose and aneurismal vessels may possess, is due to the increased development of their elastic tissues. It is scarcely necessary to add, that a test of this kind only avails to show that every vessel has a naturally fixed amount of elasticity, as well as an average capacity.

RECORD OF CASES,

By Thomas Mayo, M.D. F.R.S.
Physician to the Infirmary of St. Marylebone.

[Continued from last vol. p. 811.]

A visit to the criminal department of Bethlem Hospital is productive at present of strange and painful associations in regard to the administration of justice in this country. Hadfield, so justly saved by the eloquence and wisdom of Erskine, is no more. Dalmas, the Battersea Bridge murderer, is removed by transportation—a sentence which probably was well adapted to the extent of his guilt; for there had been a heavy injury to his head in his early life, which might fairly be taken in extenuation as to the motives of his act, though the measures afterwards adopted by him for concealment shewed that he was still susceptible of motives; and, therefore, a responsible agent. The Greenwich murderess is at present in Bethlem, where her case will afford very mischievous evidence to all such hysterical young females as may be cognizant of it, how comfortably life may be spent after the indulgence of splenetic cruelty, *provided* a human being is destroyed. There is not about her the smallest evidence of insanity.

The honourable Mr. Tuckett, cool, indifferent, and self-possessed, enjoys there the immunity from punishment which a well-chosen counsel can at any time obtain for an eccentric culprit, when the punishment of death is manifestly too severe for the occasion, and yet nothing but the plea of insanity can avert it. Oxford has the frequent gratification of being stared at as the man who shot at the Queen. Captain Johnson's cold, close, subacid visage, and quiet, gentle demeanour, is awfully contrasted in our recollection with the demoniacal violence which drink and fear, operating upon cruelty, could produce in him, without the smallest warranty of insanity. While Macnaughten, the murderer of Mr. Drummond, a man really under the influence of monomaniacal impulses, is, in these walls, as certainly prevented from outbreaks of violence by a consciousness that they would be followed by a period of seclusion, as he might, perhaps, before have been, had the laws of his country, or rather the principle on which those laws are carried out, furnished him with more definite reasons for self-control.

I am far from affirming that all these unhappy persons deserved death. I only mean to suggest, that for the sake of preventive example, they required some form of punishment.

To many of these criminal (so called) lunatics, the enduring confinement is in itself a dreadful punishment. But in these cases there is a sad expenditure of unfruitful suffering; for the confinement being entirely and sedulously deprived of the character of a punishment, operates unpreventively. I waive at present the consideration of punishment as to its reformatory effects; though here it claims attention on behalf of the unfortunate delinquents themselves, in so far as they may be responsible agents in a religious point of view.

The question how far mental disease may be deemed to coexist in some cases with elements of character on which the fear of punishment may operate so as to prevent the insane disposition from leading to crime, is one of fearful importance. Until some distinction of this kind is made good, forensic subtlety, operating upon the sympathies of jurymen, will evermore find means of procuring a very dangerous immunity for acts which penal consequences would deter. This it will effect in various ways. It will, for instance, dispose us to accept ordinary and normal states of mind, when heightened and exaggerated by external circumstances, as indicative of derangement. Such was the mode in which Captain Johnson's case was brought to issue in a verdict of insanity. Again, forensic skill may misrepresent as insane those brutal persons who want, not the intellectual, but the moral sense; for their conduct will often be nearly as perverse as that which flows out of insanity itself. This confusion would most probably have saved the life of Lord Ferrars if his trial had taken place in the present century. Or, thirdly, it may operate by extending the plea of insanity to the case of persons confessedly insane, but not insane quoad the particular act which constitutes their delinquency. Such, in a former contribution to the Medical Gazette, we presumed to have been the case of Macnaughten. In his assumption of a conspiracy against him on the part of the members of the government, he was truly insane and irresponsible; but, this delusion granted, he might still be deemed capable of appreciating the fact, that to defeat a conspiracy by an act of assassination is quite contrary to the laws of this country. His insanity was real, but partial.

These suggestions, I repeat, by no means intend capital punishment as that species of infliction which the homicidal acts alluded to ought all to have incurred. Simple imprisonment, solitary confinement, transportation, as recently in the case of Dalmas, may each find a place in such a code, whatever subsequent detention may be required for the protection of the public when the penal period may have expired. A total change of country, attended by reformatory and curative habits, may work such a change in the constitution of mind as to fit the delinquent for ultimate enlargement. Many vistas will indeed be opened into character by an improved method of dealing with its diseases, which at present have no existence.

In the case of Captain Johnson, there seems to have been no evidence of insanity. With respect to that fearful state of abnormal conduct which results from unsoundness of the moral principle, I must refer to a former work for proof of its peculiar fitness for penal infliction in its fullest extent. The theory of irresponsibility must, indeed, have positive checks somewhere; for its abstract and theoretical limits are quite out of our reach. Every man, it may be alleged, does everything under a kind of necessity, constituted by the combination of all his natural qualities with all the circumstances in which he is placed. But right reason suggests a practical limit to this theoretical irresponsibility, and resolves that it shall be enjoyed by the unsound in intellect, but shall not be extended to the unsound in heart.

The case of the young woman whom I have above alluded to is of peculiar interest in the present consideration. She had been a nurse in a family at Greenwich. A trifling disappointment relating to an article of dress had produced in her a wayward and reckless state of mind. An object to which she was much attached, the infant which she nursed, was in her way, and she destroyed it—as a fanciful child would break, in mere moodiness, a favourite doll. She is a neat, respectable, quiet person, and has been totally free from all peculiarity of conduct since her arrival at Bethlem in the beginning of the year. I have seen her in May, and again recently, through my friend Dr. Monro. On my last visit there was an increased propriety in her manner, which, though not eccentric, was pert on our first interview. Now the comparison by which I have illustrated this case suggests the habit of mind from which such cases are liable to spring, if favoured by the context of the character and the bodily constitution. I will not expend time upon an unnecessary proof that capital punishment would have been inappropriate here; but assuredly the interests of the public require that some penal infliction should be associated with such cases, when they are perused by the class whom they concern, of half educated, hysterical, and imaginative persons; for out of this combination of qualities such cases spring.

The English public have a natural fondness for trial by jury, and like to be hanged or acquitted, as the case may be, through their peers, however incompetent and casually chosen, than on any other terms. But in the above class of cases the interests at stake, and the distinction between madness and badness, are far too fine for so coarse a tribunal. The philosopher, indeed, cannot fail to observe, that the views both of judges and advocates themselves are insensibly lowered down to the dimensions of the very incompetent body in whom the decision ultimately rests.

[To be continued.]

INOCULATION FOR PESTIS BOVINA.

M. Samarjay, a Hungarian farmer, has introduced the plan of inoculating healthy cattle with the saliva of those which are diseased; and it is reported that, like human vaccination, the practice has been successful, in substituting a mild disease for the severe form of typhus which has of late proved so fatal to horned cattle in Germany and France. This plan consists in introducing the saliva of the diseased animal into a small wound made in the inner side of the thigh of the healthy animal. The disease is said to attack cattle only once.

THE SCOTCH EPIDEMIC FEVER OF 1843-4.

By JOHN RICHARD WARDELL, M.D. Ed.
Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 160.]

No. VI.—*continued.*

IN intermittent fever, a powerful sweat acts very differently, and instead of being looked upon in the same manner in which it is regarded in typhus, we view it as the safe and salutary effort on the part of nature which effectually arrests the febrile paroxysm. In that form of fever the sweat cools the body, it lessens the volume of the circulating fluid (for we must remember that this secretion comes immediately from the blood), and thus, by being relieved of their tonic fulness, and the capillary spasmodic action being in a great measure overcome, the circulation is more equable, and the vital organs are freed from the evil effects of an over-supply of blood, which must otherwise produce congestion or inflammatory action; hence from this process of nature more grave and important symptoms are averted. Seeing, as it has been shown, that the copious sweat in the epidemic was almost as sudden, and the consequent apyrexial state nearly as soon complete, as in a case of the pure intermittent type,—that the non-febrile condition continued but for a certain time, and that at the expiration of a few days the primary and identically similar symptoms noticed at the first invasion were again manifest on the return of a succeeding paroxysm, and that these alternations of the febrile and apyrexial state were not unfrequently repeated to the third, and, in some few instances, to the fourth time,—it becomes difficult to dispel the idea that, in these particulars at least, there was a veritable resemblance between it and the fever of the ordinary intermittent type. Allowing this similarity between the two, and, from what is said above respecting the physiological and pathological changes which spontaneously take place in intermittent fever, thus may in some measure be accounted for the beneficial effects induced by the sweat in the epidemic.

In Table No. V., of the eighty cases there mentioned, out of the 40 males, 33 had a well-marked critical sweat, which, in a summary way, arrested the febrile state; two had the crisis upon the 4th day, seven upon the 5th day, eight upon the 6th day, eight upon the 7th, five upon the 8th, two upon the 9th, and one upon the 13th day; this last case, however, which at the first was considered of the epidemic character, ultimately proved to be genuine typhus. Respecting the 40 females, 27 of that number had a diaphoretic crisis on the following days, viz.: five upon the 4th day, five upon the 5th, nine on the 6th, or early on the morning of the 7th, six on the 7th, one upon the 8th, and one upon the 9th day. Thus we see that amongst the males twenty-five had the crisis varying from the 4th to the 7th day, being 5-8ths of the whole number; that twenty-three of these twenty-five had the crisis from the 5th to the 7th day, being more than 4-5ths of this aggregate. Amongst the females, twenty-five out of the twenty-seven had the crisis from the 4th to the 7th day, being nearly 5-6ths of that number. In the general average, then, of these eighty cases, it is seen that the critical sweat came on at about 6¼ days from the period of accession, or on the 7th day. In the table as under, the average date of the diaphoretic crisis was 6·48, or nearly 6½ days.

TABLE VII.*

This table gives particulars respecting 40 cases that were admitted into the hospital, from Nov. 17th to Dec. 29th, 1843.

Males	16	1 in 2·5
Females	24	1 in 1·66
Average age of males . .	29	1 in 1·37
Average age of females . .	33	1 in 1·21
Occupation :—		
Servants and domestics .	26	1 in 1·53
Labourers, operatives, &c.	14	1 in 2·8
Average duration of illness previous to entering the hospital	4·4 days	
Rigors during the invasion	38	1 in 0·5
Temperaments :—		
Nervous	6	1 in 6·66
Bilious	14	1 in 2·8
Sanguineous	2	1 in 20
Nervo-bilious	12	1 in 3·33

---

* Two out of the above number had œdema of the inferior extremities to some extent; in one the spleen was exceedingly enlarged, and in another there was suppuration of the parotid gland.

Nervo-phlegmatic . .	2	1 in 20
Bilio-phlegmatic . . .	1	
Nervo-sanguineous . .	3	1 in 13·3
Head affected in a greater or less degree during the invasion	32	1 in 1·25
Abdominal complication, requiring active remedial measures	5	1 in 8
Average date of crisis by diaphoresis	6·48 or 6½ days	
Yellow cases	4	1 in 10
Number that had one or more relapses before leaving the hospital . . .	35	1 in 1·14
Sequelæ :—		
*Splenitis.	4	1 in 10
Menorrhagia	2	1 in 20
Tumefaction of mammæ	1	
Unusually severe arthritic pains	1	
Conjunctivitis before leaving the hospital . .	1	
Bronchitic affection . .	1	
Rheumatic and arthritic pains during convalescence	23	1 in 1·73
Average duration in the hospital	24½ days	
Cured	39	1 in 1·02
Died	1	

V. *The head symptoms were comparatively slight, being less severe than are generally observed in typhus: the brain and its membranes were not so often found the seat of lesion.*

The brain and its membranes are frequently affected in, and form a complication very common to, the fever of this country, and there is but little doubt that cephalic affection attendant upon continued fever is more fatal than any other complication of the vital organs; and those cases of the epidemic that went on to a fatal termination, evinced, both by the symptoms during life, and the morbid appearance on inspection, that disease in the brain and its membranes formed the proximate cause of death—that is, in the generality of instances—although unquestionable proofs were given that some died where not the least cephalic affection existed. Dr. Alison, when speaking of the manner in which the fatal issue immediately supervened in the seven days' fever, says that "embarrassment of function and alteration of structure of some organ, *generally the brain*, caused death*." The sensorial functions in continued fever are always more or less disordered, and the intensity of their affection varies according to the mild or malignant character of the disease, the kind of complication, and the idiosyncrasies of the patient: in this respect there was a manifest difference between the epidemic and the form of fever strictly termed typhus. Great delirium, low incoherent muttering, dulness of hearing, imperfection of vision, tremor of the tongue, pricking of the bed-clothes, &c., were scarcely ever noticed in the ordinary cases of the seven days' fever, so that the description of Huxham, when giving the signs of typhus, where he says—"Omnes corporis sensus maxime depravantur; vix ægri vident oculis apertis, perditur olfactus, perditus auditus, vix etiam sapidissima gustent, torpent adeo membra ut parum admotum sentescant vel acerrima vesicatoria," could with little aptness be applied; except, perhaps, in the most severe and fatal cases. When we consider what vitally important organs the brain and spinal marrow are in the animal economy, and how intimately connected they are with the great processes so indispensably necessary not only to health but life itself, that their disorder is momentarily conveyed to the most remote parts of the frame, it may then be readily imagined how any morbid condition, located in those great centres of the nervous system, must influence and peril those functions upon which life directly depends. When grave changes are going on in the encephalon, other and co-existent complications are then liable to be either overlooked or not sufficiently regarded, but when the brain is free from any serious disorder then the symptoms denoting disease in the thoracic or abdominal viscera become so prominent as to fully warn us of their presence and extent: thus it was in the fever now treated of: the hepatic region, as the liver was so frequently affected, was generally referred to by the patient as being the seat of the greatest suffering. In a very great majority of the cases which came under my own observation the head was so slightly disordered as to require but little attention; it was generally an *aching* that was complained of, and the manifest symptoms were those of vascular excitement, rather than the more important ones of a further advanced stage. With a view to cleanliness, and the comfort of the patient, the head was generally shaved on admission, which, with the application of cold, mostly sufficed as remedial measures; in more urgent cases, however, half a dozen or eight leeches usually afforded the desired relief. There was, for the most part, a good deal of watchfulness, the sleep was disturbed by sudden startings or terrific dreams, and immediately on awaking slight delirium would be apparent. Upon reference to Table No. VI., it is shown that 350 out of 450, being 1 in 1·28, or about 1 in 1¼, or 4 out of 5, had more or less of head affection, this seldom consisting of anything more than the symptoms before described. In Table No. VII., 32 out of 40 cases, being 1 in 1·25, or 1 in 1¼, had the disorder in question; and in Table No. VIII., 54 out of 80 cases, especially during the first days of the disease, complained of the head, being 1 in 1·5; and out of that number, 14, being 1 in 1·57 of the aggregate, required the application of leeches. The post-mortem appearance of the brain will be alluded to hereafter.

---

* It might perhaps have been more proper to arrange these four cases of splenitis under the head of complication, but as the organ did not become reduced to its normal size for some time, the affection is thus placed as above.

* Scottish and North of England Medical Gazette, Oct. 7th, 1843.

VI.—*A very great majority of the cases had pain and tenderness over the hypochondriac and epigastric regions, and sickness and vomiting were almost constant symptoms during the commencement of the disease.*

The numbers of patients who were afflicted with pain and tenderness over the hypochondria and epigastrium were so great as to render these well-nigh universal symptoms; and if even slight pressure was made, there were but few instances amongst them who did not then experience more or less pain in these localities. Sickness and vomiting were generally associated with the symptoms described, and the matters ejected were mostly of a darkish green; the degree of colour varying, however, according to the quantity of liquids taken into the stomach. Sometimes the pain in the epigastrium was complained of more than at the hypochondria, and in such cases the vomiting was generally more severe and persistent; and in those persons in whom the pain was chiefly located in the right hypochondrium, a jaundiced condition was very frequently observable. During the first two or three days of the fever, the sickness formed a very predominant feature; the patient would often lay his hand over the stomach, and complain of a weight or sensation of loading, and frequently everything taken would be quickly rejected during the first forty-eight hours. After the third day this distressing symptom would often be greatly mitigated, or have entirely vanished. Occasionally mere nausea was complained of, but upon interrogation it was generally ascertained that the preceding symptoms had been more urgent. The stomach being so commonly affected as it was in the epidemic, there were strong reasons for the supposition that some other organ was primarily affected; and this was undoubtedly the liver. Where the hepatic viscus was so frequently disordered as it was in the seven days' fever, the gastric affection was easily accounted for: the liver being morbidly distended with an undue secretion of bile, the bilious matter, by a reflex action of the duodenum, would be conveyed into the cavity of the stomach, on the internal surface of which any such irritant as the secretion in question could not fail to produce the sickness that was so commonly noticed. Idiopathic gastritis is an exceedingly rare disease, and indeed some authors have gone so far as to assert that it never occurs unless some irritant has been taken, or some neighbouring or other organ primarily affected—as by hepatitis, peritonitis, podagra, &c. In remittent fever, sickness and vomiting constitute a leading feature in the complaint, and in this disease the morbid state of the liver is the undoubted proximate cause of these symptoms.

In Table VI., out of 450 cases there given, 273 had pain and tenderness over the epigastrium, associated with sickness and vomiting, being 1 in 1·6, or about ten cases out of every sixteen; and the proportion would undoubtedly have been far higher had the cases been seen from the first day of the disease, or if they could have been admitted into the hospitals at an earlier period of their fever. In Table VIII. it is shown that 66 out of 80 cases—being nearly 6-8ths of the agregate—had nausea or vomiting during the stage of invasion. The subjoined case may here be given :—

Case IV.—*Gastric affection, with hypochondriac tenderness—Crisis by diaphoresis.*

Margaret Collins, æt. 28, married, hair and eyes dark; is not at all reduced, and of healthy constitution. Admitted July 22, 1843.

States has never laboured under any severe disease, with the exception of small-pox; this being many years ago. On the 16th July, first experienced the accession of her present indisposition, which manifested itself by rigors and flushings, followed by head-ache, pain in the shoulders, extremities, and over the lumbar region, with a good deal of nausea and vomiting.

On admission complains of same symptoms: has great pain and tenderness on moderate pressure over hypochondria and epigastrium. There is great muscular debility, anorexia, much thirst, breathing accelerated, and full inspiration is performed with some uneasiness and difficulty. No cough, nor any expectoration. Sleeps indifferently, and seems fretful. Bowels open, tongue loaded with a whitish-yellow pasty looking coat, but is generally moist. Pulse 124.

Mist. Salin. Diaphoret. ℥viij. cujus Cap. ℥i. 4ta. qq. hora. Vespere habeat haust. cum Sol. Mur. Morph. gt. xxx. in aq. ℥iss.

July 23rd.—Perspired very freely during last night; feels much easier; skin cool and moist; breathing unattended with pain; tongue clearer. Pulse 88, of tolerably good strength. Sickness in a great measure arrested.

24th.—No particular change since yesterday: to have

Morph. Draught repeated at bed-time.

25th.—Feels much easier; less tenderness at epigastrium; does not complain much of nausea. Says she is very weak.

Habeat Vin. Rub. ℥ iv. in die. Vespere haust. Morph ut antea. Alia medicament. omittantur.

26th.—Is rather better; bowels confined.

Ol. Ricin. ʒvi. statim sumend. Vin. Rub. Cont.

27th.—Pulse natural; continues to improve.

28th.—Improves; tongue moist; pulse 72. Complains of some degree of pain in right hypochondriac region, which extends to epigastrium.

Sinapismus statim parte aff. appd. Hab. Linctus opiatus.

29th.—Skin moist; tongue clean; pain in hypochondria and epigastrium relieved by mustard poultice: in all respects is carried on favourably.

31st.—Complains of much pain today over epigastrium, which is aggravated by slight pressure. Tongue rather dry; bowels confined; skin hot, and feels pungent to the fingers. On examination, right hypochondriac region seems a little full, and on percussion elicited sounds are less clear and sonorous than normal. Has had some vomiting of a greenish bilious-looking liquid. Pulse 120.

Hirudines viii. epigastrio appd. Mist. Salin. Diaph. ut antea Ol. Ricin. ʒvi. statim sumend. To be put on low diet.

August 1st.—Pain at stomach relieved by leeches; bowels open; tongue still dry; skin feels hot and burning. Slept only moderately last night. Pulse 128.

Mist. Contr. et Vespere habeat haustum cum Sol. Mur. M. gtt. xxv. in aqua, ℥iss.

2d.—Did not sleep well during fore part of night; sweat this morning, and has slept for several hours afterwards; skin cool and moist; bowels rather confined. Pulse natural; still some pain in stomach; and has occasional vomiting.

Enema domestica statim injiciatur.

3d.—Skin cool and moist; some vomiting still, at intervals. Pulse nearly natural, but rather weak; bowels open; tongue cleaner.

Cerevisia Oj. per diem. Pulvis effervescent. subinde.

4th.—Pulse natural, of better strength; has had no vomiting today. Bowels open. Complains of some muscular pains, and has an aching of the right shoulder.

Liniment. Saponis c. Opio humeri dext. applicand. bis terve di. Pulvis effer-ves. Linctus opiatque cont.

4th.—No more vomiting; complains of no pain. Pulse 80; tongue rather dry at edges, but moist and clean at apex and edges; bowels open.

5th.—Much the same as at last report.

7th.—Continues to improve.

10th.—No pain; bowels open; free from sickness; tongue and pulse natural.

May have common diet.

13th.—Continues to improve; no return of pain or vomiting; tongue clean; pulse 74.

15th.—Improves.

18th.—Goes on most favourably. From this time she continued to mend, and in a few days subsequently was dismissed from the hospital.

Remarks.—It is reported, in the above cited case, that the attack was ushered in with a good deal of nausea and vomiting; that on examination there were pain and tenderness on moderate pressure over the hypochondria and epigastrium; that on the night of the sixth, or early on the morning of the seventh day, diaphoresis in a summary manner cut short the febrile state; that the pulse fell from 124 to 88 in the course of a few hours, and with such reduction an attendant improvement in the general symptoms was observed, and in particular that the sickness was greatly relieved. On the 28th the right hypochondrium and the epigastrium were still tender, which affection was, however, benefitted by the sinapism. On the 31st (being the fifteenth day) the relapse had evidently set in; the pulse quickly rose to 120, and the vomiting again returned, the matters ejected consisting chiefly of a greenish bilious fluid. Two days from this date the disease was again resolved in the usual manner, viz. by diaphoresis; but still, although the apyrexial state seemed complete, as evinced by a return of natural pulsation, with certain negative indications, the pain in the stomach, with occasional vomiting, continued, and was of an obstinate character. In the report of the 31st it is stated that there was dulness of the right side, and on the 4th August it is mentioned that there was an aching of the right shoulder,—significant signs of hepatic congestion.

This case was certainly one where the gastric complication was of an unusually persistent nature, and, as before asserted, the sickness, in the majority of instances, was only observed during the first days of the fever, and it almost always became effectually arrested on the supervention of the critical perspiration.

Pickering, Yorks.

[To be continued.]

RESULTS OF EXTIRPATION OF THE UTERUS.

The woman operated on by Sauter, January 28th, 1824, died four months afterwards. M. Hoelscher, who operated in the same manner, lost his patient in twenty-four hours. Both of the patients operated upon by M. Siebold, one on the 19th of April, 1824, the other July 25th, 1825, died, one in sixty-five, and the other in twenty-four hours. Those of M. Langenbeck, operated on January 11th and August 5th, 1825, also perished in thirty-two and fifty hours respectively. The four women who were operated on by Dr. Blundell likewise perished. The first one, who was supposed to be cured, died in a year, from a relapse of the cancer; the second in thirty-nine hours; the third in nine hours; while the fourth lived only a few minutes. Mr. Lizars, who adopted Langenbeck's operation, in October 1828, also lost his patient, who died in twenty-four hours. The patient on whom M. Banner operated, on the 2d September, 1828, died on the fourth day. M. Langenbeck, who operated for the third time in 1829, was not more fortunate than he had been on the first two occasions, for his patient survived only fourteen days. M. Recamier performed the first operation in France, for the extirpation of the womb, July 29th, 1829; but he had the misfortune to lose his patient after the lapse of a year. M. Dubled's patient, operated on June 20th, 1830, survived only twenty-two hours, although the whole of the womb was not removed. In fine, two patients operated on by M. Roux, one by M. Delpech, and a second case by M. Recamier, perished alike a few hours after the operation.

This statistical and funereal record of extirpations of the uterus, is fitter than any course of reasoning to deter the practitioner from so redoubtable an attempt. It ought, therefore, to be rejected from the practice of surgery, the chief aim of which is to save life; except, perhaps, in cases where the womb, already partially expelled from the pelvis, and, in some sort, detached from the rest of the organism, may, in a sense, be said to have lost its right to inhabit the cavity of the pelvis.—*M. Colombat on the Diseases of Females, Meigs' Translation.*

MEDICAL GAZETTE.

FRIDAY, JULY 31, 1846.

A RETURN has just been presented to the House of Commons, in reference to the correspondence on the Quarantine Laws which has taken place between this country and foreign governments. From various paragraphs which have occasionally appeared in this journal, our readers must be aware that the subject of quarantine, in reference to the plague, has for many months past occupied the attention of the Royal Academy of Medicine in Paris. The discussions, indeed, are not yet completed, and the main questions, which are very few, appear to be already lost in irrelevant details. It is satisfactory to find, from the return before us, that our own Government has not been idle; and that for the last three years strong efforts have been made to procure a revision of these laws, so far as they affect the ports of the Mediterranean, and to place them upon a fixed and reasonable basis.

The correspondence is in three languages—French, Italian, and English; and is chiefly confined to communications with the governments of France, Austria, Egypt, and of some of the small Italian states. It commences on the 27th June, 1843, and is brought down to June 6, 1846. We have here, therefore, the exact position in which this country is at present placed with the Mediterranean ports, in reference to quarantine.

If any facts be required to shew the absurd and inconsistent manner in which these laws have been carried out, we do not know that we can do better than quote an extract from a letter, addressed to the Lords of the Committee of Privy Council for Trade, dated June 16, 1845, on quarantine in the ports of the Pontifical states. In 1845, Sir W. Pym was officially appointed to visit and inspect the different lazarets in the Mediterranean, the Adriatic, and the Levant, and to obtain information relative to their regulations, practice, tariff of charges, &c. He states that he found a good lazaret at Ancona, but very little in use either for passengers or goods, in consequence of the long periods of quarantine established against both. The Papal authorities seem to interrupt, as much as possible, all communication with other countries, to the great annoyance and inconvenience of individuals, and to the ruin of their own commerce. The ports in the Papal states are in free pratique with Malta and Trieste: the two last are in free pratique with the Ionian Islands, but not so the Papal ports. Passengers from Corfu, upon their arrival at Ancona, have eight days' quarantine, vessels ten, and goods fifteen. So that a steamer from Corfu with passengers, upon arriving at Ancona, lands a portion of them in the lazaret, the others proceed to Trieste, where they are immediately admitted to free pratique; and, by embarking in another vessel, return to Ancona, are there admitted to free pratique, and find their original messmates still shut up under the yellow flag!

A representation of the absurdity and injustice of these regulations was made to the Supreme Council of Health in Rome. The reply was, that they were quite aware of the difficulties, but that they could not make any alteration, being under the apprehension, if they relaxed in any way, of the Pontifical ports being placed under quarantine by Naples, Genoa, Leghorn, and Marseilles.

It appears to us, that the only principle by which the imposition of quarantine restrictions can be justified, is the prevention of the importation of contagious diseases either by persons, goods, or vessels; and that so soon as this principle is abandoned, the enforcing of quarantine becomes a species of international tyranny, the exercise of which is only tolerated on account of the firm root which the system has taken, and of its being a very convenient and lucrative means of support to a large body of lazy officials. Admitting that the fear of the plague rendered it necessary to place passengers from the Ionian Islands under eight days' quarantine, it is clear that the importation of the disease could not be prevented by sending them to another port, only two hundred miles distant, and then allowing them to return immediately to Ancona! There could, therefore, be no reasonable pretence for placing on vessels from the Ionian Islands, any restriction which did not equally apply to those coming from Trieste; but they who have had any opportunity of observing the defective administration of the laws, whether civil, municipal, or criminal, in the state of the Church, will not be surprised at the detection and exposure of such a piece of absurdity. The strong remonstrance made upon the subject appears, however, to have been attended with good effect; for in a subsequent part of the correspondence we are informed that vessels coming from the Ionian Islands, should they not contain rags, are at once admitted to free pratique by the Roman government. Under the reign of Pius IX. we shall hope for still greater improvements in the administration of these laws.

Another objection to the Mediterranean system of quarantine consists in its gross injustice, and in the injury which it most unnecessarily inflicts on the commercial intercourse of nations. Our Superintendent-General furnishes us with a good illustration of this kind which he witnessed at Leghorn—the great commercial port of Italy. The quarantine practice at Leghorn is, we are informed, most rigid and vexatious. A vessel which arrived from Jamaica, loaded with cotton and coffee, was placed under quarantine for *twenty-one days*. The bales of cotton were landed in the lazaret, and there opened and aired; her coffee was removed into lighters, and there kept for three weeks. All these proceedings took place under the pretended dread of the importation of yellow fever; and the history of this vessel was, that she had crossed the Atlantic to Falmouth; she had remained there ten days in free pratique, without infecting the county of Cornwall, and she had then made her passage in the usual way to Leghorn. It therefore follows, that, according to the Livornese Council of Health, a vessel, among the crew of which there is no pretence that fever existed, after having made a voyage across the Atlantic, remained ten days in free intercourse at an English port, and after another long voyage to Leghorn, required, on her arrival, a separation of people and goods for a period of three weeks! The port of Leghorn is in the dominions of Leopold II., the great patron of arts and civilization, and the sovereign to whom Italy looks for an enlightened imitation of the rules and customs of nations blessed with free institutions; and yet, in this transaction, we have a proof that, so far as quarantine restrictions are concerned, Tuscany has not yet shaken off the absurd and superstitious dogmas respecting contagion which prevailed two hundred years ago! If we seek for an explanation of this anomaly, we find it in the fact, that there is in this, as in other Mediterranean states, an *imperium in imperio*, under the name of a Council of Health, over which the respective governments have little or no control. There cannot be the slightest doubt that the maintenance of the Council of Health by the exaction of quarantine dues, is the cause of such restrictions, utterly useless in a sanitary view, being enforced in the nineteenth century.' We adopt this view because it appears to us impossible to suppose that the Council can believe such rules to be necessary for keeping out contagion. No one in the least acquainted with the subject can suppose that, under the circumstances above mentioned, there would have been the slightest risk of importing the yellow fever from Jamaica. It is in acts of this kind that the commercial party have found the most powerful arguments for attacking the system of quarantine *in toto*, for denying the existence of contagion in any shape, and proclaiming that intercourse among all countries should be free and unrestricted.

As a specimen of the cruelty with which such restrictions are enforced, we may take a fact mentioned in the letter of our Consul in Egypt,—the last letter of the Correspondence, dated Alexandria, May 21, 1846. It appears that from the middle of March, in consequence of the arrival in Syria of the pilgrims from Mecca, the Pasha of Egypt had placed all vessels coming from Africa, even when provided with *clean bills of health*, under from ten to fifteen days' quarantine; and we learn that the quarantine dues paid by one vessel amounted to above fourteen pounds! The reason assigned by the Pasha for enforcing this order was, that he might obtain from the Porte permission that his own ships should be admitted to free pratique on their arrival at Constantinople! Independently of the injury thereby done to commerce, our Consul refers to a case in which medical assistance was, with great inhumanity, denied to the sick under the most urgent circumstances. On the 17th May, a vessel arrived in five days at Alexandria from Beyrout, having on board the family of the late Bishop of Jerusalem. It was immediately placed in quarantine. One of the family, a child sixteen months old, had been attacked with dysentery, and Mr. Farquhar, who was called in to attend the child, was only permitted to see it at a distance, and could not, therefore, give that attention to the case which it required. Our Consul interfered, and called upon the Pasha immediately to liberate the vessel from quarantine. This was declined, and the only concession made was, that Mr. Farquhar should be allowed to touch the child on his adopting the precaution employed in plague cases, *i. e., of dipping his fingers in oil!* Better things might have been expected from Mehemet Ali; but so long as heavy dues are exacted as part of the system, there is but little hope of redress. One step in advance would be to levy the tax under another name, and to set the vessels free.

The remarks which we have here made tend to show the absurdity, inconsistency, injustice and cruelty, with which quarantine restrictions are enforced in the ports of the Mediterranean; and we propose, at another time, to lay before our readers an account of the proceedings of the British Government, in union with that of France, to abolish these absurd regulations, and to substitute for them a mitigated form of quarantine in cases in which a restriction of intercourse may appear to be reasonably necessary.

STATE OF THE PUBLIC HEALTH IN THE METROPOLIS.

SOME alarm has been created by the circulation of a report that the Asiatic cholera had made its appearance in London. We can state on the best authority that this rumour is unfounded. As we have remarked in our weekly summary of the tables of mortality, cholera and diarrhœa are and have been for some weeks past very prevalent; but there are always one or more fatal diseases peculiar to every season, and the spring excess in deaths from hooping-cough and measles has now been exchanged for a summer excess in deaths from diarrhœa and cholera, the former principally among young children. We are able to go a step beyond our weekly summary, and give the deaths from these diseases up to the 25th instant.

Week ending	Deaths from Cholera.	Deaths from Diarrhœa.
July 11	8	87
July 18	20	124
July 25	26	156

It will thus be seen that diarrhœa is prevalent, and on the increase. The deaths are nearly quintuple of the summer average, and, as the following table will shew, are especially numerous among young children.

Deaths from diarrhœa under 15 years of age:—

Week ending	July 11	76
,,	July 18	108
,,	July 25	130

We believe that it is chiefly owing to the prevalence of diarrhœa, that the rumour has arisen of the cholera having broken out in London. We shall take care to report any further information that may reach us.

SUPPLY OF WATER TO ROME AND LONDON.

THE probable supply to the 1,000,000 inhabitants, of which Rome could one time boast. amounted to 50,000,000 cubic feet, being equal to about 50 cubic feet for each individual. This is probably 20 times the quantity which London now receives for each of its inhabitants—a fact which goes far to justify the application of the disgraceful term 'bathless' to this the largest, the most opulent, and the most powerful city in the world. How miserably insignificant do our water-works appear and how trifling the supply they furnish to this mighty city of more than 2,000,000, when contrasted with the immense flood of pure water poured into old Rome by her gigantic aqueducts! And how discreditable the difference between the two capitals, when we reflect on the far superior resources which modern science has placed at her command, and on the well-known fact, that through the happy constitution of the strata on which London stands, she has at her command—requiring, as it were, but the smiting of the rock to make them gush forth—boundless supplies of the purest possible water!—*Mechanics' Mag.*

Reviews.

Medical Notes on China. By JOHN WILSON, M.D., F.R.S., F.S.S. Inspector of Naval Hospitals and Fleets. 8vo. pp. 267. London: Churchill. 1846.

IT would, we fear, be no very difficult task to prove that the value of the services rendered to this country by the medical officers of the army and navy, is not, and has never been, sufficiently appreciated either by the nation or by the government. It will, of course, always be the case that the evils which obtrude themselves within our personal sphere of action, and which are actually presented tangibly to our senses, make an infinitely deeper impression upon our minds, than those which we understand to be in operation to a far more extensive and destructive degree in places far removed. And, on this principle, it happens that;—while the occurrence of a severe epidemic which destroyed some hundreds of the population of one of our cities, would be observed with the greatest consternation by the people at large, and while the services of the medical men who were most successful in checking the malady, would scarcely fail to meet with general approval;—the deaths of thousands of our most valuable fellow countrymen, who annually perish from diseases contracted during their public service in the colonies, produce regret only in the minds of those individuals at home who personally suffer from the loss of friends thus untimely snatched away, while the public at large consider so disastrous a sacrifice of life merely as a thing of course; and, if they even reflect upon the matter for an instant, regard the efforts of those military and naval surgeons whose constant task it is to strive against pestilential disease, in climates where such disease never disappears, as the mere common-place performance of a routine service. There are, however, two powerful facts which stand forth with startling reality upon the very threshold of this subject; namely, that in the first place, by far the largest proportionate sacrifice of human life which occurs in the British dominions is that which is produced, in the colonies, by sickness among the sea and land forces employed by government for the protection of those territories;—that great as is certainly the loss of life which is the indispensable attendant of our national victories, the constant and regular destruction of existence which the diseases and hardships of foreign climates work among our troops and seamen, is immeasurably greater; that, in fact, "they who die of the pestilence are more in number than those who perish by the sword;"—and, in the next place, that it is entirely owing to the researches and exertions of the medical officers of the public services that such sacrifice of life is not immeasurably greater than it at present is,—that owing to the suggestions of gentlemen belonging to these classes, the mortality among sailors and soldiers has, for more than a century, been gradually upon the decrease, and that it is only from the same source that a still further diminution of the evil can reasonably be expected.

It appears, from tables recently adduced by Mr. Balfour,* that out of nineteen of the principal foreign stations, there are not less than fourteen in which the yearly mortality among the British troops is comparatively greater than the average annual mortality of the whole English population; and this too among picked men, at the most vigorous period of life, upon whom the natural processes of decay have never acted. It is unnecessary to enter into a long detail of the comparative mortality among the troops at the several stations, but it will be sufficient to state that, while the mortality among all classes of the English population, at home, is about 22·09 in a thousand, that among the troops in the Ionian Islands (the most healthy station with the exception of six of the nineteen mentioned by Mr. Balfour) is 28·3 per thousand; in the Mauritius, 30·5; St. Helena, 35; Madras Presidency, 52; Ceylon, 57·2; Bengal Presidency, 63; Windward and Leeward Command, 85; Jamaica 143; Bahamas, 200; Sierra Leone, 483. And yet it is a demonstrable fact that, in consequence of the researches of official medical men, the average annual number of deaths among the soldiers and sailors employed at several of these stations has been, of late years, considerably diminished; and there is every reason to believe that—even should the scarcely warrantable anxiety to preserve the most useless of our territories still determine the government to persist in paying an annual tribute of human lives for their tenure—an increased acquaintance with sanitary means will enable our military surgeons to contract yet further the range of disease in the colonies. It is unnecessary to dwell at much greater length upon the great and trying character of the services rendered by the medical officers of both services,—one additional fact will suffice. It has been stated, and doubtless with much accuracy, that, between the years 1755 and 1762, not less than 130,000 seamen of the English Navy died of disease, two-thirds of them from scurvy. It is to the intelligence of our medical officers that the almost entire annihilation of sea scurvy is wholly due—the disease which annually more than decimated our fleets now occurs only with sufficient frequency to prove that surgeons are possessed of absolute specifics for its cure. We will not pretend to say that the medical officers of our army and navy are treated by government with intentional illiberality, but of one fact we are certain—namely, that those gentlemen have never received any thing approaching to sufficient encouragement in cultivating the various scientific branches of their profession. The opportunities which the army and navy surgeon enjoys of adding to the store of information respecting an infinite number of subjects in pathology, æthnology, natural history, geology, botany, chemistry, &c. are almost unbounded, but his encouragement to undertake such labour is narrow in the extreme. He has attained a rank beyond which he has but the remotest prospect of rising by any means less valid than that of powerful interest; scientific fame can hardly be elit him in the narrow circle in which he moves, and the expense and trouble of publication can scarcely be undertaken by one whose hours of leisure and whose income are alike limited. But we trust that such disadvantageous circumstances will not always continue to operate. The government has recently shown great discrimination in advancing several of those medical officers who have distinguished themselves by their scientific writings, and we believe that the claims of one of the most indefatigable of these gentlemen—the author of "Memoirs of West Indian Fevers," "The Medical Notes on China," &c.—have not been overlooked. It must eventually be discovered that it is not sufficient that every precaution should be taken to ensure the admission of well-educated medical men into the public services:—the best knowledge will gradually fall away, and the highest ambition grow faint, under the consciousness that, beyond the strict line of duty, every effort that can be made will pass unappreciated and unrewarded. We fully believe that the medical officers of the two services will never be found wanting in perseverance or in skill, but the only certain mode of obtaining for the country and for science the highest results which the labours of those gentlemen are capable of achieving, must be the establishment of the principle, that the possession of unusual scientific acquirements, shall, in both services, prove a certain claim to distinction and advancement which no undue favouritism shall magnify, and no want of interest set aside.

---

* Quoted in MEDICAL GAZETTE, vol. xxxvi. p. 210.

The author of the work before us has been long favourably known to the profession by his contributions to statistics and other branches of medical knowledge. The "Medical Notes" contain many interesting and curious facts relative to the climate, topography, and diseases of those parts of China which were occupied by the British forces during the late war; inquiries into the origin of the sickness which then prevailed in the fleet and army, together with many other topics which may well engage the interest of the medical reader. The latter part of the work is devoted to a sketch of Chinese medicine, which certainly appears to have very slender claims to the character of a useful science.

It has been for some time understood that the mortality in Hong Kong is greater than in all the other stations for British troops, with the exception of Sierra Leone, the annual mortality in the former station being 208 in one thousand.* The following is a fearful record of the injurious effects of the climate of Chusan upon the European constitution, in an instance where a body of men had been rendered liable to disease by the misarrangement of those who conducted their transportation from England.

On the 1st of October there were received into hospital fifty soldiers of the 98th Regiment, suffering from intermittent fever, dysentery, or protracted diarrhœa, and the results of cholera, the three first forms of disease being in most cases combined; they have just arrived from Yang-tse Kiang, where they were taken ill. In all these cases there is exhaustion and emaciation, in many of them to an extreme degree, with organic lesion, which is evidently beyond the reach of art; in a considerable number the powers of life are reduced to the lowest point compatible with existence, and cannot proceed much further. There are besides cases of sloughing ulcer, laying bones bare in the extremities, and bed-sores of the worst description. In short, it seldom happens that a larger proportion of wretched beings present themselves, or that the destructive effects of miasmatous poison are more strongly manifested, than in this regiment. The fifty cases received into hospital were the worst, but in most of those remaining in the Belleisle the same effects in different degrees, but in all painfully, are unequivocally marked. The search for a healthy-looking man is vain; everywhere, stretched helplessly on deck, suspended in cots and hammocks, or tottering unsteadily a few paces, are seen the subjects of wasting disease, with the sallow earthy complexion, shrunk features, emaciated frames, feeble limbs, and despondent looks, so sadly characteristic of miasmatous poisoning. The regiment entered the river little more than three months ago, upwards of eight hundred strong, having at the time a very moderate sick-list; but seventy rank and file are capable of performing the lightest duty. It is known that one hundred and seventy have died; but the total number of deaths till this date is not known, part of the regiment being still on the river on board a transport employed as an hospital. But, knowing the loss which the regiment has already sustained, and looking at the condition of the regiment which is now here, it may be foretold that half the men who entered the Yang-tse Kiang in health will never again be fit for military service. This is a very formidable loss to be suffered in so short a period by disease, no fatal casualty from battle having occurred. Other portions of the land as well as the sea force, sustained considerable injury and loss, but none of them anything like this corps. Why is the comparison so much against it?"

---

* See MEDICAL GAZETTE, vol. xxxvi. p. 69.

Dr. Wilson resolves this difficulty very clearly, by stating the astonishing fact that the regiment left England in a ship of seventy-two guns, in which, including detachments of other corps, women, children, and the ship's company, were embarked altogether close on *one thousand three hundred persons*, and that the crowding of masses of men in so small a space during so long a voyage must necessarily have rendered them totally unfit to endure subsequently the trying effects of an unhealthy climate. Surely the adoption of such a step as this was never sanctioned by medical authority. When the learned of future times come to peruse the details of the planning of the Niger expedition, and of such egregious specimens of official mismanagement as this, they will have some reason for believing that we of the nineteenth century, with all our boasted learning and acuteness, had scarcely emerged from the lowest depths of barbaric ignorance.

Dr. Wilson makes some important suggestions upon the best manner of purifying ships in situations where endemic fever is liable to occur, and especially upon the practice of admitting and pumping out water frequently. In illustration of this subject he cites the instance of the Apollo frigate, which left Plymouth in company with the unfortunate Belleisle; proceeded to Yang-tse-Kiang, was employed there for some time, and had afterwards been employed upwards of three months at Tinghae. During the whole period she was healthy, absolutely and relatively. While employed in the river, she had a few cases of malignant cholera the product of external causes; but from disease which is legitimately supposed to arise from agency within, and peculiar to the ship herself, there was comparative immunity. Dr. Wilson believes this to have been owing to the measures employed for cleansing and purifying the lower parts of the ship. Water was let in, and pumped out regularly and frequently, but with varying frequency according to the state of the weather. The author here enters into an interesting discussion of the comparative merits of this plan, and of that which has generally been adopted of using every means of keeping the lower decks of ships as dry as possible, and believing that the latter plan in reality assists the evolution of unwholesome gaseous products, while the former by frequently covering the decks with fresh water would lead to the absorption and removal of the febrific emanations.

The details of the medical practice of the Chinese, with which this volume concludes, are remarkably curious, but are interesting only from their singularity. The medici of the celestial empire appear to have done very little in their profession that is worthy of imitation.

It might have been expected that a literary and intelligent people, who had studied the various branches of the healing art for many ages without possessing either the inclination or the power of consulting the medical literature, or of acquiring in any way a knowledge of the curative practice of other nations, would, by their own unaided reasoning, have succeeded in eliciting and establishing many important conclusions highly confirmatory of the doctrines which form the true basis of medical science. But, except to a very trifling extent, this has not been the case in China:—the practitioners of that country are totally ignorant of anatomy and physiology. Surgery, in any proper sense of the word, Dr. Wilson informs us, has no existence among the Chinese. And their therapeutics, although elaborate enough in their way, are, of course, useless, in not being regulated by any knowledge of pathology. Their materia medica consists of an immense number of substances, vegetable, animal, and mineral, but appears to include very few things identical with or similar to the medicinal substances employed in Europe.

> "Camphor, rhubarb, and liquorice, were conspicuous among the recognised articles; but our familiar friends in the shape of purging salts, calomel, tinctures, &c. were nowhere found. Even opium, of which so much is used as a luxury, does not appear to be admitted into the materia medica; at least it could not be traced in any form in the drug shops. Cinnabar, or a substance

much resembling it, is a favourite remedy in many external diseases, and it consequently is a prominent article in every collection."

It does not appear that the Chinese are acquainted with the employment of mercury in any efficient form. One fact, however, is mentioned which is of great interest — namely, that the practice of artificially producing small-pox by inoculation has been employed by the Chinese for many centuries: according to their account one mode of inoculation has been in use upwards of a thousand years; but the origin of the practice in that country appears to be unknown.

We regret that the length of our introductory remarks has prevented us from quoting so fully from Dr. Wilson's interesting and important work as we could have desired: our anxiety to advocate the claims of the valuable class to which Dr. Wilson belongs may have led us to dwell rather too briefly upon the merits of his work, but we are confident that the author will not feel inclined to blame us for adopting such a course.

Historical and Critical Remarks on the Operations for the Cure of Cataract. By ALEXANDER WATSON, M.D. &c. From the Edinburgh Medical and Surgical Journal, No. 165. 8vo. pp. 35. Edinburgh: 1846.

THE larger proportion of Dr. Watson's essay is devoted to an investigation of the ancient opinions relative to the nature of cataract, and a history and comparison of the various operations which have been adopted for its cure. The author states, that he "has been induced to publish the following remarks chiefly because several distinguished authors have published erroneous statements regarding many of the points here referred to, which were in danger of being copied by others, instead of the original sources being consulted. Dr. Watson has evidently devoted considerable care to literary research on the subject of cataract, and we doubt not that future writers may advantageously refer to the historical facts which he has collated: our extracts must, however, be taken from one or two parts of the essay in which original suggestions have been advanced by the author.

In commenting upon the instruments which have been employed by various operators for dividing the cornea in the operation of extraction, Dr. Watson remarks—

"Let it be assumed that the size and form of the incision requisite to be made is nearly one half of the circumference of the cornea. Now the average diameter of the cornea is 9-20ths of an inch. Hence the extreme breadth of the knife required to divide somewhat more than one half of the cornea by transfixing it, is a quarter of an inch. The length of the knife ought to be such that the broadest part required for the operation should be about half an inch from the point. This admits of the incision of the cornea being completed without the nose being wounded; and, at the same time, the breadth of the knife increases so gradually that it penetrates with facility, without the premature escape of the aqueous humour. An extracting knife made upon these principles, with two straight edges, forms at its point an angle of 15°. A knife of this form, prolonged towards the handle, constitutes that of Beer, now so generally employed. Figure 12" (we must here refer the reader to the pamphlet itself) "shows that this knife may be considerably reduced in size, and yet be of sufficient breadth to complete the incision, and it will be found to be of the utmost consequence in practice that it be reduced to the least possible breadth; for upon this the facility and safety of using it very much depend. The blade of the proper knife, therefore, for this operation, should, at its point, form an angle of 15°; it should be from an inch and a quarter to an inch and a half in length; and although the breadth is regulated by the angle formed, no part of it requires to be more than a quarter of an inch broad. Both the back and the cutting edge of the blade should form straight lines, at least to the broadest part; sharp on both edges near the point; the back ground off nearly to a cutting edge; the blade thin, but retaining sufficient firmness not to bend in use; and the cutting edge should be set so as to cut by pushing the blade forwards." (p. 10).

The following is a brief account of the dissection of an eye from which the author had successfully extracted the lens seven years previously.

"No injury was done to the eye by the operation, except the incisions of the cornea and anterior part of the capsule of the lens. The patient made a good recovery. A circle of opaque lenticular" (?) "substance was seen within the capsule of the lens at its circumference. It appears to me to be a

> difficult question to answer, whether this is a portion broken off from the margin of the lens at the operation, which has remained there for seven years undissolved; or consists of some lenticular matter, poured out from the parts by which it is formed, as an attempt at the reproduction of the lens—a circumstance alleged by physiologists to take place after its removal in the lower animals, and one of some practical importance." (p. 15).

The author proposes an important modification of the operation for depression: we conceive this suggestion to be highly deserving of the attention of practical surgeons. Dr. Watson observes—

> " Keeping in view, as the great object to be accomplished in the operation of depression, that the lens is to be lodged in a breach of the vitreous humour, below the axis of vision, with as little disturbance to the parts connected with it as possible, let us consider the effect that is produced by the operation performed according to the usual directions given upon the subject. The mode generally recommended is, after introducing the needle through the coats of the eye, that the point of it is to be brought forward between the iris and lens, laid upon the upper part of the anterior surface, and the lens is then to be pressed down, below the margin of the iris and into the vitreous humour, out of the axis of vision. Now, in order to depress the lens in the vitreous humour by this operation, it must be pushed forcibly through the posterior part of its capsule and hyaloid membrane. But, from the size and form of the lens, and the strength of these membranes, in place of forcing a passage for itself through these, the lens generally drags them downwards, and displaces the hyaloid membrane from the ciliary processes; thus producing extensive and serious injury to several most important and delicate parts within the eye. Besides this, the lens almost always rises up again, from the elasticity of the parts, and their disposition to resume their former situation; and, if the anterior part of the capsule has been opened, the lens gets in contact with the posterior surface of the iris, and causes great pain and inflammation, generally followed by the disorganisation of the eye. These consequences may be obviated by an operation somewhat novel, which I shall now describe. From what has been said above, it forms an important object in this operation to disengage the lens from its capsule before depressing it. This must be done very carefully and methodically by making an incision in its posterior part, through which the lens is to be pushed into a breach made in the vitreous humour, not by forcibly pressing the lens against the membranes, but by the needle. To accomplish this I introduce a small cataract bistoury through the coats of the eye, about a line and a half from the margin of the cornea. It then penetrates into the vitreous humour, and is made to form a breach in it, at the proper place for the reception of the lens when depressed. The point of the instrument directed forwards to the lens is then to be pushed across the eye to the opposite or nasal side of the lens. When it has reached this situation the point is to penetrate the posterior part of the capsule, and, by drawing it outwards, made to incise it across at its middle, from the nasal to the temporal margin. This being effected, the point of the needle is to be pushed forward between the lens and the iris, its flat side placed on the lower part of the lens, and made to press it backwards and upwards, so that its lower margin may pass backwards through the opening made in the posterior part of the capsule: by then shifting the point of the needle forwards upon the lens it is gradually passed backwards and downwards into the breach of the vitreous humour, from whence it never rises. Thus we accomplish, by previously cutting with the needle, what has generally been recommended to be done by forcible pressure upon the lens. Little or no inflammation follows this operation. If, in this operation, the anterior part of the capsule of the lens remains entire, it is so far well, as the humours in the different chambers of the eye are thus prevented from incorporating, which lessens the risk of subsequent inflammation. If the capsule afterwards becomes opaque it can easily be removed by a subsequent operation. In performing this operation considerable dexterity of management is required for opening the capsule, disengaging the lens, and depressing it into the vitreous humour; and, as the capsules, being generally transparent, are invisible, each of the different steps of the operation requires to be methodically executed. The same mode of operating answers for reclination. If, contrary to expectation, the lens is found to be soft, it may be broken in pieces; and these, or some of them, depressed into the vitreous humour, where they will dissolve."

Towards the conclusion of his essay, Dr. Watson throws out some rather ambiguous expressions, which appear to be intended to intimate that our students of medicine are not sufficiently instructed on the subject of ophthalmic surgery, and that the lower orders of society suffering from diseases of the eye are unable to obtain the necessary skill and care for the relief of their affliction which are commanded by the rich. We were not aware that the subject in question has been particularly neglected by the teachers in the principal British schools of medicine; and we are certainly unprepared to admit, that in any of our large cities the poorer classes are likely to fail in obtaining hospital accommodation and surgical relief when suffering from ophthalmic affections. Dr. Watson alludes to the humanity of the Empress Maria Theresa of Austria, who, in 1770, caused two large wards to be prepared in the General Hospital of Vienna, for the reception of ophthalmic diseases, and also, in connection with this, created a lectureship, to which she appointed the celebrated Barth as teacher of diseases of the eye, with a suitable endowment. Dr. Watson considers that this example has still to be imitated: but has it not long since been imitated, if not to a sufficient, certainly to a considerable, extent? London possesses two large institutions, together with several smaller infirmaries, for the gratuitous treatment of diseases of the eye. The poor of Glasgow have, we believe, for many years received the assistance of two gentlemen who are second to none in their knowledge of ophthalmic surgery; and Dr. Watson is himself senior surgeon to the Edinburgh Eye Infirmary. In all these cities students have, we conceive, very ample opportunities of receiving instruction upon the subject in question; and therefore, as Dr. Watson has not specified the exact places where the imperial example is so culpably disregarded, or pointed out the man who is, in his opinion, most qualified to become the Barth, Beer, or Von Rosas, of the new institution, we fear that his suggestion must remain in abeyance until its necessity is proved, or further explanations of its precise meaning are vouchsafed.

Hints for Pedestrians, Practical and Medical; with Illustrations, &c. By MEDICUS. London: Simpkin & Co. 1846. pp. 110.

ALTHOUGH we do not find much that is original in this book, yet the subject is well treated, and the matter well arranged. Some of the most useful and practical of the hints are derived from the Memoirs of Col. Shaw, and the Manual of Health of Mr. Davis, to both of whom the author duly acknowledges his obligations. Only those who have undertaken long pedestrian excursions can be aware of the number of little and easily accessible conveniences required for comfort. The mode of managing the feet, the kind of dress best suited for all weathers, and certain rules for living, are matters a knowledge of which is indispensable to those who wish to benefit mind and body by an expedition of this kind.

From a few of the hints, we are disposed to infer that the writer, who is a physician, has not carried his pedestrianism beyond the well-made roads and highways of Great Britain. Thus he advises that a dinner should consist "of *plain animal food without many sauces* (!), or partaking of made-up dishes." If he will try the hostelries of Savoy and Piedmont, the Grisons, and the wilder parts of Germany, as we have done, we will answer for it, that should he be always able to get "plain animal food," and bread which does not require to be split by an axe, he will not only dispense with "sauces," and submit to the infliction of all sorts of "really made-up dishes," from "*entrailles de volaille*" downwards, but will think himself well feasted. Again, he speaks of a glass of ale, or porter (save the mark !), or a couple or three glasses of wine after dinner; and gives several tests for the detection of damp sheets. This is right-down English pedestrianism: it reminds us of our unfortunate countryman who was caught with a bottle of Harvey's sauce in his portmanteau at the Dogana of Venice,—as well as of those intrepid travellers who lay in an abundance of provisions and personal comforts, when about to undertake the ascent of Skiddaw and other lofty British mountains! As to damp sheets, a regular pedestrian should be able to sleep in his clothes without any sheets—either on hay, the shoots of the larch, or a wooden bench, as the case may be.

We are most pleased with the account of the preparations for the journey, in the shape of accoutrements and dress. Having travelled some hundreds of miles on foot, we agree with the writer that *worsted* stockings, or socks, are the only articles which can be worn with comfort. The form of shoe which he recommends, one covering the instep, is decidedly to be preferred. One pair served us, to the best of our recollection, for seven hundred miles. We doubt the propriety of having very thick soles, as these prevent a free play of the foot. The shoe should always be fully an inch longer than the foot; and from the difference in the size of this part in sitting and standing, the length should be taken only in the erect position, as, from the weight of the body, the long arch of the foot thus becomes elongated. This hint on the mode of measurement for boots and shoes might be profitably adopted by many fire-side travellers. A man with a high instep *ceteris paribus* makes the best pedestrian.

The author condemns the practice of walking with the toes turned inwards. He does not seem to be aware that, according to the concurrent testimony of travellers, this practice is uniformly adopted by those tribes of the American Indians who are remarkable for their pedestrian powers. It is stated that they can make much longer journeys on foot in this way, than by walking with the toes outwards; and notwithstanding the better appearance of the latter mode of progression, we can answer, from no little experience, that this is attended with much greater fatigue.

On the whole, we decidedly recommend this little book to all those who are inclined to take to the road. We do not see why English medical students should not follow, in this respect, the example of their brethren in Germany, who, with their meerschaum pipes, well-worn blouses, and dusty knapsacks, are to be seen, during the summer season, on every peak of the Alps and in every "ruin" of Italy. There is certainly no discipline so well calculated to strengthen the body and improve the mind, as a well-planned pedestrian excursion.

Dr. Hooper's Physician's Vade-Mecum; or, a Manual of the Principles and Practice of Physic. New Edition, considerably enlarged and improved, with an *Outline of General Pathology and Therapeutics*, by William Augustus Guy, M.D. &c. 12mo. pp. 523. Renshaw. London: 1846.

We greatly doubt whether, in its original form, Dr. Hooper's *Vade-Mecum* did in reality present a useful outline of the Principles and Practice of Physic, and much question its claim to the popularity which it formerly enjoyed. Our readers must be aware that we hold in very slight esteem works which profess to teach medicine and surgery "in little." A large proportion of students are willing to learn no more of their profession than appears absolutely necessary to enable them to pass an examination; and are apt to adopt the curt and narrow principles contained in their text-books as certain and confirmed axioms, an error which can only be removed by the too often painfully acquired experience of practice. We conceive, however, that, in the hands of Dr. Guy, this Manual has taken on a new and materially improved character. Very extensive and useful additions have been made by the editor, who has also re-written a considerable portion of the original work, at the same time making several judicious alterations in the arrangement of the matter. We are not acquainted with any text-book of similar scope to which the student commencing the study of medicine can more safely and more advantageously refer.

Proceedings of Societies.

PATHOLOGICAL SOCIETY, MANCHESTER.

July 8, 1846.

Healing of a large cavity in the lung: prolonged recovery from tubercular disease.

Dr. Watts presented a portion of lung, in which a tubercular cavity had perfectly healed. The recovery was complete for some years: he had carefully watched the progress of the cure himself since 1842. The following are the particulars of the case:—

A woman, previously in good health, in her 57th year, at the beginning of winter, 1839-40, became affected with cough, which persisted through the winters 1840-1, and 1841-2. The cough, however, grew much worse in October, 1841, and the expectoration, which had been a frothy slime early in the disease, turned purulent, and was for some months spit up in large quantity; but gradually, as summer approached, it became less and less, and, in the fore part of June, 1842, when the patient came under treatment, the sputum (then small in amount), consisted of thick tenacious pus, marked with straw-coloured streaks, in which a portion of tuberculous lung was detected on microscopical investigation. The left half of the chest, particularly the subclavicular region, was much depressed, and expanded very imperfectly on inspiration. The left clavicular and scapular regions, and left interscapular space, were dull on percussion. No respiratory murmur was audible in the upper lobe of the left lung, but instead of it were heard bronchial respiration, crepitus, and bronchophony, cavernous respiration, gurgling, and pectoriloquy.

Griffith's mixture with sedatives, and a hypnotic pill, and restorative regimen, were prescribed, and the woman improved in health: the expectoration stopped, the cough seldom troubled her, she resumed her domestic duties, and ultimately dispensed with medical aid; and, but for some shortness of breath and general impairment of constitution, she considered herself well.

She was visited, at long intervals, however, during the next four years, in order that the result of this unexpected convalescence might be noted; and she again came under treatment in February, 1846, for pulmonary catarrh, contracted when the weather, after having been singularly mild for winter, became of a sudden cold and wet. On this occasion her breathing was hurried and the cough troublesome, particularly at night; and the expectoration consisted of frothy mucus and puriform nummular sputa. She had lost flesh within three weeks since this attack, but did not appear visibly so thin as she had been four years before. The signs of cavity in the upper lobe of the left lung did not materially differ from those heard in 1842: the pectoriloquy and cavernous respirations were, however, still more distinct. No morbid sounds, besides sibilant respiration and a little mucous rale, were audible in other parts of the lungs. The woman was seemingly again on the point of convalescence, when overwhelming grief and a succession of domestic difficulties affected her profoundly: she then lost all appetite for food, and, after lingering in a state of extreme debility, died, somewhat suddenly, on the 20th of June, 1846, from dropsy of the lungs, at a time when suffocative catarrh was prevailing.

On examination after death, a healed cavity, capable of containing a small orange, was found at the summit and back of the upper lobe of the left lung; the rest of this lobe being in a state of fleshy induration, deeply coloured with black pigment, and nowhere crepitant, but, on the contrary, wholly devoid of air, like lung that has been long compressed by fluid. Many bronchial tubes opened into the cavity, which was lined by a transparent shining membrane, most perfectly organized, and on several spots congested and bloodshot. The cavity contained no tubercle nor other morbid matter. The lower lobe of the same lung was crepitant, but dripping with serosity a little coloured with blood and fine foam and presented here and there, at distant intervals, small grey granulations, not larger than No. 4 shot, single and few in number.

At the summit of the superior lobe of the right lung was a grey-coloured tubercular mass, not larger than a hazel-nut, in the state of retrogression, and partly advanced in the process of chalky change. This was surrounded by a portion of lung, deeply coloured with infiltrated pigment, indurated for the space of half an inch immediately around the tubercular matter, though elsewhere crepitant: the rest of this lobe was crepitant and somewhat emphysematous. The middle and inferior lobes were crepitant, but charged like a sponge with serosity, not differing from that already described. There were a few single, shot-like, grey granulations, scattered here and there throughout these lobes. Both lungs were intimately attached to the thorax by adhesion of long standing: they presented no very remarkable appearance of congestion. The abdominal viscera were not diseased.

Dr. WATTS considered that the deposition of tubercles had commenced in the summit of the left lung, in the winter of 1839-40, and in that of the right lung in the winter of 1840-1; that in October, 1841, the process of softening began in the tubercles of the left lung, and according as they became ripe and fully matured, they softened and were expectorated until summer, 1842, when the last remnant of them was evacuated, and the healing process commenced in the cavity; and that the tubercle of the right lung, which was small in amount, began to retrograde contemporaneously with the healing of the cavity and the restoration of the patient's general health, and entered upon the gradual change into earthy matter.

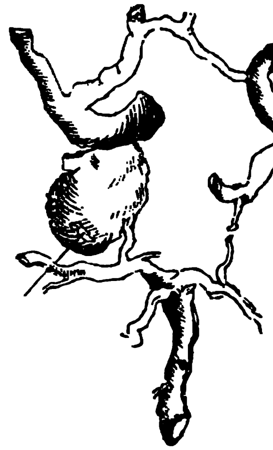
That the cavity existed about five years open, four of which it remained in a healed state without relapse, being lined with a membrane as well organized as the membrane of the air-tubes, so perfect was the cure; but that, ultimately, in the seventh year from the commencement of the disease, in the fifth from the first formation of the cavity, in the fourth from the healing of the same, the slight deposition of grey granulations occurred during the attack of catarrh; that, however, these granulations, so few in number, scattered one by one at distant intervals throughout the pulmonary structure, so recent and little offensive, were in nowise connected with the fatal termination of the case; and that the woman died from sudden effusion of serous fluid into the lower lobes of the lungs, under circumstances sufficient to account for the occurrence.

That, under more favourable auspices, this might have been a permanent recovery from pulmonary consumption, and from extensive though circumscribed deposition of tubercle; for the woman, after having outlived such an attack for so long a period, in poverty and affliction, after having recovered for so many years from tubercular disease, did but die at last, well advanced in age, from one of the common accidents of life.

The case appeared to him as strongly confirming the opinions of those pathologists, who, from mere anatomical investigations, have been led to infer that tubercle of the lungs admits of cure.

Aneurism of posterior communicating artery of the brain; no antecedent symptoms.

Dr. Francis laid before the Society an aneurism arising from the junction of the left carotid and posterior communicating arteries, and involving both these vessels. The tumor was of the form and size represented in the accompanying wood-cut.



Upon the outer and inferior wall was a ragged opening, a line and a half in length, through which fatal hæmorrhage into the surrounding parts had ensued.

The lateral ventricles were greatly enlarged, and filled with clotted blood mingled with flocculi of brain, which had been broken from their walls, and the central parts between them. The fourth ventricle was much distended by the hæmorrhage, which had also extended around the medulla oblongata, cerebellum, and the base of the brain generally.

The left side of the heart was empty, the right, together with the lungs, full of blood and, excepting a few small spots of commencing atheroma in the thoracic aorta, the viscera of the trunk were sound.

The patient, a female servant, æt. 62, had gone to bed in apparent health, after having eaten her ordinary evening meal, and whilst in the act of rising on the following morning was, suddenly and without any warning, seized with semi-convulsions, passing rapidly into profound coma, in which she died rather less than an hour from the seizure.

She had gone about her duties with the appearance of health, and had made no complaints to those about her of any premonitory symptoms.

Judging from the time which elapsed before death took place, it is probable that the opening in the artery was gradually increased in size, and that the force of the extravasated blood expended itself upon the central and anterior parts of the brain, before it invaded the medulla oblongata; the situation of the bleeding point being mainly instrumental in determining the rapidity of death.

The rupture itself appeared to have been the result of gradual attenuation of the walls of that part of the sac, rather than of any vital change leading to their disintegration.

Cauliflower Cancer of the Bladder; origin from right ureter.

Mr. Dumville presented a cancerous tumor, of the cauliflower variety, that grew by a thick pedicle from around the orifice by which the right ureter terminates in the cavity of the bladder. The tumor, which was formed of areolar tissue, and blood-vessels, and nucleated cancer-cells, had attained the size of the fœtal head, and near its circumference, where softening had begun, presented abundance of caudate and club-shaped cells, and also inflammation-globules. The irregularities of its surface were filled up with slaked urinary phosphates. The mouth of the ureter was surrounded on every side by the morbid growth, without obstruction, however, to the passage of the urine, which had flowed through the midst of the tumor by a fistulous canal, formed of condensed areolar tissue, continuous with the ureter. The bladder, with the exception of slight muscular hypertrophy, was elsewhere healthy, and closely enveloped the tumor. Both ureters were dilated and thickened, and the kidneys were very pale, and somewhat indurated; but there was no disease of any other organ.

Case.—Hugh Hughes, aged 68 years, of

temperate habits, and previously in good health, began to complain, eighteen months ago, of pain in passing urine, especially in voiding the last drops. The pain was principally referred by him to the hypogastrium, and was described as intolerable, and the straining to make water most distressing. Not long afterwards he became subject to hæmaturia; the blood flowing sometimes in excessive quantity. From this time he frequently voided with the urine white earthy matter, and repeatedly, also, incrustations, like fragments of thin shells, which cut the urethra in passing, and occasioned much pain. The urine was alkalescent all the time he was under treatment.

Mr. Dumville considered, that when patients obstinately oppose, as Hughes did for a long time, a thorough examination with the sound, the passage of so much calcareous matter, particularly of such incrustations, may readily lead to mistaken diagnosis by raising a suspicion of the existence of stone in the bladder.

One opportunity only was offered him, in this instance, of introducing the catheter, about a month before death, when the presence of cancer was at once suspected, from the instrument impinging upon a soft substance, and from copious hæmorrhage following its withdrawal.

General Carcinoma of the Bladder and Urethra.

Dr. Wilkinson presented a specimen of cancerous degeneration of the whole substance of the bladder, and also of the prostate and urethra. The bladder thus diseased was four inches long by five inches broad, and its walls measured rather more than an inch in thickness. The inner surface was rough and uneven, and the vesical cavity was filled with phosphate of lime, which was partly pulverent and in part coarsely granular. Both kidneys were small, pale, and indurated. No other organ was diseased.

The man was 56 years of age, married, and had not had syphilis. Three years and four months before his death, which occurred 30th of June, 1846, he began to have dribbling of urine, and intense scalding in the urethra after complete evacuation of the bladder; though otherwise in apparent health. These were the only symptoms of indisposition for some time. From March, 1845, however, he was subject to violent pain and retraction of the testicles, especially of the left testis, together with shooting pains down the thighs and aching in the loins; and repeatedly, during last summer and winter, he passed fragments of calculus with his urine, by which he suffered excruciating agony. The desire to make water became distressing and urgent, and the passing of the urine was accomplished with suffering, besides being succeeded by acute pain of the glans penis. He had wasted considerably, and was cachectic looking. An introduction of the sound was followed by hæmorrhage; the loss of blood, however, relieved his suffering for some days. On examination per anum, a hard substance was felt in the vicinity of the prostate. The urine was very acid up to April 1845, when it became neutral, and later alkalescent;—finally, it was strongly ammoniacal and loaded with mucus, and deeply coloured with blood.

Dr. Wilkinson directed attention to the striking similarity of the symptoms of this disease, for a length of time, to those of vesical calculus; and to the frequency of the passage of calculi, as a possible source of erroneous diagnosis in such instances, if the practitioner be not sufficiently watchful; and also to the singular severity of the retraction of the testicles, which, if not here dependent in some measure upon repeated irritation of the kidneys, was at least as intolerable as he had ever known it to be in acute nephritis.

Convulsive Hysteria, ending in death.—Morbid appearances.

Dr. Renaud exhibited the spinal marrow, stomach, ovaries, and uterus, of a girl who died of convulsive hysteria: no lesion being found in any part of the organism, on post-mortem inspection, sufficient to account either for the symptoms or the fatal result. The brain and spinal marrow, as well as their membranes, were most healthy, and no unusual appearance of the nervous substance was detected on careful investigation with the microscope. There was no morbid effusion of serum in the ventricles of the brain, nor in the arachnoid cavity, either within the cranium or spinal canal. The heart, lungs, and thoracic viscera, were healthy, though the cavities of the heart were gorged with blood. The stomach was not healthy; its mucous membrane was thickened, and a little congested; the mucous follicles were enlarged, and it presented the appearance of well-marked mamillonnæ, and also two minute erosions at the middle of the great curvature; the uterus was in the virgin state, and though the os uteri was a little reddened, it was not tumid. Towards the fundus were some dark red patches, chiefly confined to the peritoneal investiture, not penetrating deep into the substance of the organ, which was firm, and mucous surface of the usual colour and appearance. The vagina was healthy. Both ovaries were plump, and boggy to the feel. On the right a pisiform vessel protruded. On section each ovary displayed many vesicles of the size of peas, filled with serous fluid and granular particles. There was no unusual vascularity either of the ovaries themselves, or of the broad ligaments, or oviducts.

Dr. Renaud remarked, that the partial redness of the uterus might have existed some time prior to the fatal attack, as the girl had been leeched three weeks previous for uterine pain; that there were ample evidences of uterine excitement; but as he had frequently seen as marked excitement in the ovaria unaccompanied by hysteria, he was of opinion no very clear views of its true pathology could be gleaned from the morbid appearances; and further, that the attack apparently supervened in consequence of an extraordinary indiscretion committed in diet; he could see no evident connection, however, between the morbid appearances of the stomach and the hysteria.

In the case reported by Dr. Hawkins, in 1826, no lesion was found in the brain. It does not appear that the spinal marrow was examined. The uterus was rather large and vascular, and its lining membrane red and injected.

In Villermay's case, in which the attack was occasioned by terror, the uterus was not examined, but the ovaria contained a large collection of rounded vesicles. The brain and spinal marrow were unaltered. The vascular system was much deranged.

The remarkable dissimilarity of the reports of these cases goes far to prove how greatly additional facts relating to this singularly obscure disease are needed.

Selections from Journals.

CHEMICAL PATHOLOGY.

ANALYSIS OF THE URINE IN DROPSY AFTER SMALL-POX.

BY DR. HELLER.

The patient was a young girl, who, after the subsidence of a severe attack of variola, became the subject of general anasarca. The urine was of a pale fawn-colour, turbid, had an acid reaction, and deposited an abundant coarse-grained sediment; possessing therefore most of the general characters of the urine in Bright's disease. A microscopic examination of the sediment detected heaps of urate of ammonia, intermixed with which were numerous colourless crystals of uric acid: cylindrical tubules of epithelium from the canals of Bellini, to which also adhered crystals of uric acid; also pus-cells, blood-corpuscles, and pavement epithelium. The urine contained also a quantity of uroxanthin. Its acid reaction remained even after it had been kept four days in a warm room, at the end of which time numerous crystals of uric acid were found deposited on the sides of the vessel. Its specific gravity was 1012. On the addition of nitric acid its colour was changed to violet, and a quantity of albumen was thrown down in the form of a violet-coloured precipitate. On chemical analysis 1000 parts of the urine were found to consist of water 961·80, solid constituents 38·20. Of the solid constituents 10·53 parts consisted of urea, 0·55 of uric acid, 6·90 of albumen mixed with colouring matter of the urine, and with a small quantity of hæmatin, 17·76 of extractive matters, and 2·56 of fixed salts. Among the salts there were only traces of the chlorides found. As the patient recovered, the urine gradually resumed its normal characters; the specific gravity rose, whilst urea and the salts, especially the chlorides, gradually increased in quantity; though for long after the urine contained a large amount of albumen. The chemical and microscopic characters of the first specimen of urine examined in this case were very similar to those presented by urine in Bright's disease, with the exception of urea being in about its normal proportion,—which according to M. Becquerel is 10·366 in 1000 parts of the urine of women.—*Heller's Archiv.*

CHEMISTRY.

ON THE SEPARATION OF THE IODIDES AND BROMIDES.

The plan commonly adopted is to add to the mixed solutions of iodide and bromide of potassium a solution of nitrate of silver, and to wash the mixed precipitates in ammonia, which dissolves the bromide more readily than the iodide. M. Duflos, considering this process to be complex, and likely to lead to erroneous results, has suggested a new method for the separation of these substances.

When sulphate of copper is added to a solution of iodide of potassium, protiodide of copper is precipitated; and notwithstanding the addition of sulphate of copper in excess, one half of the iodine of the iodide remains in solution. If the mixture be now saturated with sulphurous acid, the whole of the iodine is precipitated in the state of protiodide, while the bromide remains (in the cold) undecomposed. The protiodide of copper may be separated by filtration, washed, dried and weighed. The washings may be added to the filtered liquid with a fresh quantity of sulphate of copper and sulphurous acid; and the mixture brought to the boiling point. The bromide now undergoes decomposition, and the bromine is entirely precipitated in the state of protobromide of copper, which may be estimated like the iodide.

If the object of the analyst be merely to determine the presence of bromine in the mixture, it is sufficient, after having separated the iodide of copper by filtration, to add to the filtered liquid a solution of chlorine and a small quantity of ether. On agitating the mixture, the ether rises to the surface, carrying with it any bromine that may have been present.—*Gaz. Med.* Juin 6.

⁂ We doubt whether this will be found more perfect than the old plan, and it is certainly more complex. On making a trial of M. Duflos' method, it was ascertained that the filtered liquid after the addition of sulphate of copper and sulphurous acid still contained traces of iodide.

SURGERY.

TREATMENT OF SUBCUTANEOUS NÆVI.

After describing the appearance of subcutaneous nævi formed by vascular tumors in the texture under the skin, and not in the skin itself, Sir B. Brodie observes: "You may very easily cure such nævi by caustic. For this purpose I have a very narrow knife, perhaps about the eighth of an inch in width; I introduce it into the middle of the nævus, and move it in different directions, so as to cut in pieces, as it were, its vascular structure. I then have a probe armed by dipping the blunt end of it into nitrate of silver melted in a platina or silver spoon. The probe thus armed is to be introduced into the puncture made by the narrow lancet, and moved about, so that wherever the lancet has divided the blood-vessels, the caustic may penetrate also. It causes inflammation and sloughing, at the same time obliterating the vessels beyond the margin of the slough. When the slough is separated, there is a slight discharge of pus for a few days, and, if the tumor be of small size, you will find that is cured; but, if it be large, the application must be repeated. I have used this on several occasions with great advantage, especially when the tumor has been on the face, where it was a great object not to destroy the skin. If you remove one of these tumors either by the knife or by ligature, you must, in either case, leave a large cicatrix. But by applying the caustic in the way I have mentioned, you save the skin. I was requested to see a little child that had one of these subcutaneous nævi at the tip of the nose, giving it a very ugly appearance. By far the greater part of the alæ of the nose was involved in the tumor, and to have cut it out would have disfigured the child for life. I treated it according to the method which I have just explained. Several operations were required, but they succeeded perfectly; the child is quite cured of the nævus, and I will not say that you see no mark at the end of the nose, but there is so little that, unless your attention were called to it, you would not know that anything had happened. I have destroyed an extensive subcutaneous nævus occupying a very large portion of the face, in the same manner, there being very little or no scar afterwards.—*Lectures on Pathology and Surgery.*

Correspondence.

SCLEREMA NEONATORUM.

Sir,—In the present state of uncertainty respecting the pathology of sclerema, or induration of the cellular tissue of new-born infants, I think the following case of partial induration may be interesting, as it shows that, in this form at least, if not inflammatory in its origin, the disease may assume an inflammatory character during some part of its course. The mother of the little patient, a remarkably corpulent woman, was delivered after a labour of thirty-four hours' duration; in the last eighteen of which the birth had made no progress, the breech being the presenting part, and suffering extreme compression at the brim of the pelvis, as was shewn by the tightness with which it was impacted, the escape of meconium during each pain, and the deep semicircular marks upon the buttocks of the child after birth. The mother having had a large family I did not wish to interfere, till, finding the pains grew weak and irregular, and that even ergot only excited them for a short time, and with no good effect, I at length with great difficulty succeeded in bringing down the right leg by hooking my forefinger over the thigh and groin, after which I easily brought down the other leg, and the body followed without any difficulty. In consequence of a violent hæmorrhage that required all my attention to the mother, I did not notice the child more than to observe the circular mark I have mentioned, and that the compressed parts were very hard and infiltrated with blood, for which I ordered some warm fomentations. In a day or two afterwards the mother called my attention to a red, hard, swelling in front of the thigh, about the size of a hazel-nut, that prevented the child from extending the limb, and which I should have concluded had been caused solely by the pressure of my finger during delivery, if I had not found another precisely similar above the right clavicle, and many more, varying in size from a pea to an inch in diameter, and half an inch thick, on each side the neck, back, thighs, and legs, not occupying the ordinary seats of glandular swellings only, but scattered over the surface, and amounting altogether to about a twelfth of the whole surface of the body.

The tumor on the right side of the neck suppurated slightly, and that on the right thigh remained red and painful for several weeks; and it was more than three months before the whole of the tumors disappeared, those on the buttocks being the last to subside. Poultices to the neck and thigh, with fomentation, and friction with French chalk-powder over the other parts, formed the local treatment. The irregular state and vitiated secretions from the bowels, however, required constant attention for a considerable time.

OBSERVATIONS. — In support of my idea of the inflammatory nature of the swellings, I may remark, that the red-gum in this child was very extensive, and assumed the form of minute pustules, and that till lately she has suffered much from an impetiginous eruption, to which her mother is also subject. Whatever influence pressure might have had on the swellings of the thigh and buttocks, it could have had little or none on those of the neck and other parts; nor was the weather sufficiently cold, though in the month of October, for this latter very usual cause of sclerema to exert its influence in producing the complaint: nevertheless, I cannot assert that the delicate skin of the infant may not have been suddenly chilled in some of the frequent ablutions to which children at that early age are always subjected; and thus by a kind of reaction have become affected with a low form of inflammatory action only sufficient to produce induration of the cellular tissue of certain parts, while other portions, more excited by the pressure during birth, exhibited more decided marks of inflammation.

I have for some years recommended the use of French chalk-powder to nurses in preference to the common violet powder, as it is softer to the touch, makes the skin smoother, is less subject to friction from the clothes, &c.; and when wetted by the discharges, it does not dry into a hard scale or crust, but readily returns to powder. In all cases where simple friction is required it is far better than the bare hand, as it prevents excoriation completely, besides that its cleanliness renders it far preferable to any greasy applications.—I am, sir,

Your obedient servant,

T. OGIER WARD, M.D. Oxon.

9, Leonard Place, Kensington,
July 21, 1846.

ON MUCO-PURULENT EXPECTORATION.

SIR,—Kindly permit me, through the medium of your journal, to draw attention to a passage from the lectures of Mr. Hawkins, in your No. of 26th June last (page 1110), on the subject of muco-purulent expectoration in lumbar abscess, as illustrative and corroborative of a remark made by myself some years ago, in a report published in the "Transactions of the Bombay Medical and Physical Society," No. 5, page 54, relative to similar expectoration in hepatic abscess, without, as is generally supposed, rupture through the lungs.

Allow me to quote the passage:—"It may be thought curious, however, that the abscess (of the liver) should have progressed so far without bursting through the bronchial tubes; but, from what we have observed, this is really a much more rare occurrence than is generally supposed by non-stethoscopists. We were first led to this by our anxiety to trace a case in this way by the auscultatory phenomena. We have seen several take this course, whether from the substance of the liver, or beginning between its peritoneal coat and the diaphragm; but not one can we say that has actually burst through the lung. The muco-purulent discharges mixed with blood, which in some cases are copiously expectorated, come from the lungs or bronchial tubes themselves, generally from a progressing pneumonia and bronchitis. Indeed, the comparison of these discharges with the contents of the abscess afterwards, is fully demonstrative of this. But we have seen the same in a case of lumbar abscess which had risen up behind the pleura without penetrating it."

Mr. Hawkins, however, is in my opinion wrong as to the dulness on percussion, at least as a general rule.—I am, sir,

Your most obedient servant,

R B. A. HUNTER,
Surgeon, 57th Regiment.

Chatham, July 24, 1846.

ON THE AFRICAN FEVER.

SIR,—Whoever has read with attention the recently published Parliamentary Report on the subject of the malignant Fever on board the "Eclair," cannot but come to the conclusion that the disease was decidedly and strongly contagious. The outbreak of the fever at Bona Vista, after the departure of the steamer from that island, is a *fact* which the anti-contagionist will find hard to get over. It is, however, right to remember that it has been stated, on seemingly good authority, that a malignant fever existed in one of the adjacent islands at the very time that the "Eclair" was in the harbour of Bona Vista. Before, therefore, we urge the above argument further, we must wait the result of Dr. M'William's mission, as stated in the very elaborate article on the "Eclair Fever," in the last number of the Medico-Chirurgical Review. Meanwhile, we beg to tender you our very best thanks for the papers that you have given on the subject, in some of the recent numbers of your excellent journal.

OBSERVER.

July 26, 1846.

Medical Intelligence.

HONOURS CONFERRED ON SCIENTIFIC MEN IN FRANCE.

THE French government has recently conferred the dignity of Peers of France on two eminent members of the French Institute, MM. Flourens and Poinsot

SINGULAR DECISION ON A CASE OF CRIMINAL ABORTION.

IN our last volume a case was reported in which, on a charge of attempting to procure abortion, the woman was found guilty, but a point was reserved for the consideration of the judges[*]. The defence was, that the female on whom the attempt was made was *not pregnant*, therefore the prisoner could not be guilty of the crime alleged. The present statute says nothing respecting the pregnancy of the female. The case having been considered by the judges, they have just decided that the prisoner was rightly convicted, *i. e.* that the pregnancy of the female upon whom an attempt at *abortion* (?) is made is not a necessary part of the proof;—in other words, that a person is liable to punishment for attempting to perpetrate what, *ex naturâ rerum*, it is impossible to perpetrate! There may be good policy in convicting such persons, but surely some alteration is required in the statute-law to meet these cases. Could a male person deprived of sexual organs be convicted of an attempt at rape?

ACADEMY OF SCIENCES AT LEIPSIC.

THE King of Saxony has just founded an Academy of Sciences at Leipsic, on the two-hundredth anniversary of the birth of Leibnitz. It will be composed of two classes, the first including the physical and mathematical sciences; and the second, history and philology.

ROYAL COLLEGE OF PHYSICIANS.

DR. J. R. Bennett and Dr. W. Baly have been elected Fellows of the Royal College of Physicians.

ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Fellows of this College, on Tuesday last, Mr. Richard Welbank was re-elected a Member of the Council, and Messrs. R. D. Grainger and J. Luke were elected in the vacancies occasioned by the resignation of Messrs. White and Babington.

KING'S COLLEGE HOSPITAL.

AT a meeting held on Saturday last, His Royal Highness the Duke of Cambridge in the chair, it was stated that the funds already raised for the erection of the new hospital nearly reached £3000.

QUARANTINE LAWS.

IT is announced that the present state of the quarantine laws will form one of the most prominent subjects of discussion in the scientific congress about to be held at Genoa.

The Queen of Spain has just issued a decree to the effect, that vessels arriving in the ports of Spain from Morocco, provided they have clean bills of health, and no case of plague has occurred within a year at the place whence they sailed, shall be at once admitted to pratique; and that all foreign vessels, in order to enjoy the same privilege, must present a certificate from the Spanish Consul of the port whence they sail, stating that the clean bill of health is a genuine document.

THE MILITIA BALLOT.

WE some time since announced that a new militia bill was about to be introduced into Parliament. It appears that the present government has given up the intention of legislating on the subject during the present session. A bill suspending the ballot for a year is now before Parliament. Those members of the profession who considered that their interests were likely to be seriously involved by a new militia act, may make their minds easy on the subject. The militia act is now likely to continue in the same state of abeyance as that in which it has been for the last fourteen years.

ALLEGED DEATH FROM MILITARY FLOGGING.

A SERIOUS difference of opinion has arisen among the medical witnesses who have been summoned to give evidence at the inquest on the body of a soldier, who lately died at Hounslow, after having been flogged by the order of a court-martial. Most of the witnesses admit that the deceased died of disease of the lungs and heart; but while one refers this to the indirect effect of flagellation disorganizing the muscles of the back, and leading to inflammation by contiguity of parts, the others consider that the fatal disease has sprung from natural causes, and was not a result of the flogging. When the case is completed we shall probably offer some remarks on the evidence. The inquiry has sufficiently shewn the inhumanity and brutality of this form of punishment.

---

[*] Case of Mary Goodall, vol. xxxvii. p. 831.

LUNATIC ASYLUM AT VIENNA.

The Emperor of Austria has just nominated a commission, to the members of which is to be entrusted the foundation of a new lunatic asylum at Vienna. The commission is formed of the directors of the old asylum, and of several physicians of the principal cities of the empire, with Baron Lago as president. The government has already advanced a sum of one thousand pounds towards the establishment.

A DESCENDANT OF FRERE CÔME.

Dr. Souberbielle has just died in his ninety-second year. He was born on the 19th March, 1754, at Pontacq, and was a pupil of the celebrated lithotomist Frère Côme, to whom he was related. Dr. Souberbielle devoted the greater part of his time to diffuse the benefits and defend the practice of the high operation for stone, first suggested by his patron. Notwithstanding his advanced age, he is said to have practised this antiquated operation with considerable skill and success.

ACCIDENTAL POISONING AT THE VAL-DE-GRACE—OFFICIERS DE SANTÉ.

It is well known that in France there is a hybrid class of practitioners, called Officiers de Santé, who are considered by the University to be just capable of undertaking "the ordinary exigencies" of medical and surgical practice. A patient in the hospital died soon after swallowing a draught prescribed by an officier de santé. It is stated that the prescription was misunderstood by the dispenser, and that the draught, which contained an overdose of laudanum, and was intended for another patient, was administered to the deceased by mistake.

A FRENCH VIEW OF ENGLISH MEDICAL JOURNALISM.

After the lectures, which usually occupy five or six closely printed pages of the weekly medical journals, come the original articles. The character of these can scarcely be described in a general manner: they differ from ours in consisting, most commonly, of detached observations,—such as a remarkable case of cure, a monstrosity, a fact interesting from its importance, the mention of a new remedy, or of a new process, rather than of a long memoir, a complete monography, a description methodically divided into etiology, diagnosis, symptoms, anatomical lesions, and treatment. The positive spirit of the nation has given this tone, and editors willingly conform to it, selecting all their extracts, and compiling their analyses on the same plan.

In the French medical journals correspondence is of rare occurrence; in England, on the contrary, the fire of correspondence burns incessantly, and without languishing a single moment; and, what is remarkable, this fire is not kept alive by a mere spirit of self-love, or by claims of priority; almost invariably the object is serious and scientific. Two causes especially contribute to this result: first, the immense circulation of the journals, a circulation which is so extensive that scarcely a single fact can be stated, or doctrine advanced, but in the very next number of the journal correspondents are observed writing from all directions to furnish analogous cases, and to subscribe themselves for or against a particular doctrine, by advancing confirmatory or contradictory facts. Secondly, the general custom allows to correspondents the convenient shelter of writing anonymously—a great encouragement to any one desirous of severely opposing, attacking, ridiculing, or snubbing a rival or an adversary. Nevertheless, in spite of the certainty of impunity, the style of these letters (at least of those admitted for insertion) appears to us to be always calm and moderate. It is true that their authors have little reason to fear discovery under the singular and false names behind which they screen themselves. Alpha and Omega are the most ordinary signatures, and certainly the most transparent ones. A certain Beta is appended to all the letters in the Lancet of the 4th of October, 1845, on a question of ichthyology; but this choice is not a frequent one. Delta has more success, and recurs frequently, as well as Zeta, Punctum, Modestus, Veritas, &c. Some have relation to the subject discussed: for example, in the Lancet of 1843 was exhibited the spectacle of a regular combat between *Anti-copaiba* who decried the use of copaiba in gonorrhœa, and *Anti-blenorrhœa*, whose name, more cheering to his patients, would appear to declare war against the disease, and not against the remedy. Some writers, again, influenced by the fear that their productions will not be inserted, subscribe themselves insidiously, *A Constant Reader*. This class is numerous, and seldom meets with refusal.—*Gazette Médicale*, 13 Juin, 1846.

OBITUARY.

On the 29th April last, Domingos Ribeiro dos Guimaraes Peixoto, chief physician to Don Pedro II., Emperor of Brazil. He is reported to have been a man of great talent, and much respected by all who knew him.

On the 8th July, at Dusseldorf, M. Benzenberg, formerly professor of chemistry and astronomy.

On the 17th inst., at St. Lawrence, Thanet, Sir Thomas Grey Knight, M.D. F.R.S. and for more than 25 years magistrate of the County of Kent and the Cinque Ports.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

Friday, *July* 24.—T. H. Marshall.—O. E. P. Chard.—H. S. Saunders.—W. L. Grundy.—H. Sillifant.—J. Rowe.—J. Bolton.

Monday, 27.—J. Olguin.—F. Hooker.—F. P. Davies.—E. M. Tearne.—A. Y. Kayat.—D. N. D. Basu.—G. C. Seal.—B. N. Bose.—W. R. Black.—M. Johnson.—R. Nichol.—R. D. Ball.—W. Cross.—W. P. Hill.—J. Spurr.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Jul. 18.

Births.		Deaths.		*Aver. of 5 yrs.*	
Males....	624	Males....	505	Males....	493
Females .	638	Females .	548	Females .	475
	1262		1053		968

Deaths in different Districts.

(34 *in number;—Registrars' Districts,* 129. *Population, in* 1841, 1,915,104.)

West—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	148
North—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	196
Central—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London .... (Pop. 374,759)	230
East—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar .... Pop. 393,247)	201
South—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	278
Total	1053

Causes of Death.

Col. A. Weekly Averages of 5 Summers; Col. B. of 5 Years.

		A.	B.
All Causes	1053	898	968
Specified Causes	1050	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..	261	201	188
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c. of uncertain seat	124	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	160	155	157
4. Lungs, and other Organs of Respiration	258	227	294
5. Heart and Blood-vessels	33	23	27
6. Stomach, Liver, and other Organs of Digestion	115	87	72
7. Diseases of the Kidneys, &c. ..	14	6	7
8. Childbirth, Diseases of the Uterus. &c.	11	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c............	11	6	6
10. Skin, Cellular Tissue, &c.	5	1	2
11. Old Age	35	52	67
12. Violence, Privation, Cold, and Intemperance	23	26	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	5	Convulsions	46
Measles	6	Bronchitis	24
Scarlatina	12	Pneumonia	35
Hooping-cough ..	36	Phthisis	168
Diarrhœa........	124	Dis. of Lungs, &c.	18
Cholera..........	20	Teething	21
Typhus	29	Dis. Stomach, &c.	15
Sudden deaths ..	6	Dis. of Liver, &c.	8
Hydrocephalus ..	44	Childbirth	6
Apoplexy........	25	Dis. of Uterus, &c.	5
Paralysis........	18		

Remarks.—The total number of deaths was 155 above the summer and 85 above the annual average. The mortality is higher this week than it has been for a considerable period. The great increase of deaths may be attributed to the prevalence of diarrhœa and cholera. The deaths from diarrhœa were 124! (summer average, 32, and of these cases 108 were among young children. The deaths from cholera were 20, of which 10 were in persons above 60 (summer average, 4). The mortality was above the average in all the districts, excepting the East.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer	29·96
,, ,, Thermometer[a]............	64·9
Self-registering do.[b] ...... max. 110·5 min.	43·2
,, in the Thames water ,, —0 ,,	65·2

[a] From 12 observations daily. [b] Sun.

Rain, in inches, 0·31: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 3·9° below that of the mean temperature of the month (61°). The extreme hebdomadal range in the self-registering thermometer was 67·3°.

NOTICES TO CORRESPONDENTS.

We should have great pleasure in inserting Mr. J. Porter's letter, but as it would necessarily draw a reply from the gentleman whose practice is impugned, we are compelled, according to our rule, to decline its insertion.

The communication of Mr. Skey will appear in the following number.

The second part of Dr. Robinson's paper has been received, and the whole will be published as soon as our arrangements with other correspondents will permit. The publication of the paper will be resumed next week.

We are obliged to Dr. R. Stewart, of Belfast, for his note. When we next resume the examination of these Reports, his suggestions shall be borne in mind.

We have to thank Prof. Puchelt, of Heidelberg, for an excellent report of an interesting case of Poisoning with Diluted Nitric Acid.

Mr. T. Redwood's letter was received too late for the present number. It shall be inserted next week.

Lectures.

SUBSTANCE OF A

CLINICAL LECTURE,

Given at St. George's Hospital,

By Cæsar Hawkins, Esq.

Surgeon to the Hospital.

June 16th, 1846.

1. *Bougie fixed in urethra—Urinary abscesses and fistulæ.*
2. *Lateral dislocation of elbow—Fracture of humerus.*
3. *Dislocation of humerus and of carpus—Palsy of hand.*
4. *Dislocation of innominatum—Fracture of sternum, humerus, tibia, and fibula—Wound of knee and perineum.*

I propose to bring under your notice today a few cases of injury, which have not been thoroughly understood by all of you, and which merit some attention in the absence of more interesting cases.

I. The first is an unusual kind of accident inflicted by the patient himself. William Danby, 62 years of age, was admitted on the 7th of this month with this account. Last week he had an attack of retention of urine, and was attended by Dr. Willis, who, after having introduced a catheter for him, gave him part of a bougie to pass for himself for a stricture in the front part of the urethra. This portion he by some accident pushed into the urethra, and was unable to remove it; but with the exception of some pain he made water very well, and when admitted last night a No. 3 catheter was passed by Mr. Spitta with ease into the bladder, and some urine was drawn off; but while making water this morning it came out of itself, and proved to be a portion of common bougie, about four inches long. He has a stricture about two inches from the glans, and has had it for the last year and a half, with occasional retention, and he is also continually passing phosphatic calculi, and has been so for the same time. The penis and scrotum are a good deal swollen, and have been so for the last ten days, and became suddenly swelled while making a great effort to pass his water. The urine is highly alkaline, and contains some pus.

I have several times known catheters broken off in the urethra, and recede into the bladder, where they have required an operation for their removal, being of course encrusted over by phosphatic deposit, but I do not remember to have seen a bougie pushed by the patient into a false passage in the urethra, as I suppose this must have been, from the odd circumstance of the catheter passing by its side without detecting it. The opening, however, if there be one, may heal again; the swelling of the scrotum, and perhaps that of the penis, having taken place before the bougie was used.

The next day there was still a good deal of œdema and pain about the scrotum; but he made water easily. On the 10th an abscess that had formed on the upper part of the right side of the scrotum was opened by Mr. Spitta, which contained nearly two ounces of dark, putrid pus, but was not found to communicate with the urethra, and I was obliged to enlarge the opening the next day, and the surface of the abscess was sloughy. It is said in the note that urine to all appearance passes by the aperture, but the patient denies having seen any water come through, and the probe failed to pass into the urethra. Yesterday (the 15th) urine was found to pass through a small sloughy opening into the urethra, just in front of the scrotum; the abscess in the scrotum was contracting, and this will probably soon heal up.

But the new abscess is of much more serious importance, and it moreover communicates by a large orifice with the urethra, as the man says the whole of the water passed out of it yesterday. A fistulous opening into the urethra in front of the scrotum is always very difficult to heal, and you must always avoid it whenever it is possible. A fistula coming through the perineum, or through the scrotum, has a sufficient thickness of cellular tissue between the skin and the urethra to heal up readily, and all that is commonly required for the new openings to heal is to enable the urine to pass more readily through the natural passage: but it is not so in the other situation: there it has a much greater chance of cicatrizing, so as to unite the mucous membrane to the skin, and leave the orifice permanently open. If, therefore, calculi are passing through the urethra and lodge in front of the scrotum, you should always endeavour to draw them forwards to the orifice, a little of which enlargement may enable them to come out; or if you cannot bring them forwards, you should try to pass them backwards, so as to cut on them in the perineum behind the scrotum. You will endeavour to get these fistulæ to heal by keeping a catheter in the bladder, through which all the water may pass, while you prevent cicatrization by the application of caustic, or the actual cautery, so that a granulating surface may be kept up till the edges of the skin come together and unite. I thus succeeded, on one occasion, in healing a small opening an inch behind the glans, through which a calculus had made its way by ulceration; and on another occasion, when an opening had been made by a boy tying a piece of string round the penis, which is not an uncommon trick. But such attempts to heal a fistula on the urethra not unfrequently fail. A boy, about ten years old, was recently sent to me by an old pupil of the hospital, in whom a fistulous opening had been formed, about half way between the scrotum and the glans, by a string tied round and left on eleven weeks before it was discovered; there was a very bad stricture thus formed, which had been two years and a half under treatment, but without any benefit. If the application of caustic, or the actual cautery, fail to keep the orifice raw, so that the granulations may close the orifice, a Taliacotian operation may be tried, though the passage of a little of the urine through the urethra by the side of a catheter makes it difficult to procure union of the new surfaces. A modification of the operation has lately been proposed by Dieffenbach, which consists of not turning a flap of skin round, or bringing the edges of the skin together, but of separating two little lateral flaps of skin sufficiently from the penis at the sides of the fistulous opening, for a larger part of the raw surfaces to be kept in contact; a broader surface for adhesion being thus obtained than when the edges alone touch one another. A case treated by Mr. Le Gros Clark in this country is said by him to have thus succeeded, whereas the difficulty of the old operation will be apparent to you from its having been proposed (and I think practised also) that an opening should be made in the perineum, and the whole of the urine obliged to pass for a time through this opening; no drop of water thus irritates the raw surface of the anterior opening, and as soon as it is perfectly healed no difficulty is experienced in healing the posterior one. Fortunately a fistula in this part is not very common*.

II. The next case to which I will draw your attention is one of fracture and displacement of the elbow-joint of not a very common kind, in which you have seen the difficulty that frequently arises in the diagnosis of injuries of this joint. John Street, 32 years of age, was admitted on the 5th of this month in a state of drunkenness, with fracture and some displacement of the internal condyle of the humerus in the left elbow-joint, and displacement of the olecranon of the ulna inwards; but the ecchymosis around the joint was too great to admit of the determination of any other part of the joint being fractured. It was caused by his falling from a hay-rick on his elbow. An angular splint was placed on his arm on the inner side.

When I saw him the next day the pain was considerable, and the swelling extended from the fingers to the shoulder, with considerable tension of the arm: the quantity of blood was, indeed, so great that you may still see it after it has made its way from the elbow to the trunk of the body, where the whole of the back from the hip to the shoulder is discoloured; and the pressure of this effused blood of course impeded the circulation, so as to produce much œdema of the hand and forearm. I did not, therefore, even examine the elbow, which at first only gives unnecessary pain; the motion and position of the several parts are made very obscure, and even if you could ascertain the nature of the displacement, it is no use trying to reduce the dislocation, if there be one, till the tension is lessened so as to allow of the bones being moved. A dozen leeches were applied, with cold lotion, and were repeated the next day; and on the 8th I examined the joint, as the swelling was somewhat lessened. It was quite clear that the internal condyle was displaced, and could be moved with crepitus, and that there was a lateral displacement of the forearm, but I could not quite satisfy myself whether there was not some other fracture of the end of the humerus, or of the head of the radius, and some fracture may exist in these cases without crepitus being at first perceived, while the blood and swelling separate the portions of bone from one another.

The prominent outer condyle seemed from measurement as if it might have a small portion of the head of the radius left attached to it, and I almost thought I could bend the end of the humerus on the shaft, close above the condyles, such a transverse fracture being not unfrequent along with the oblique separation of one or other condyle. I could not examine it much, however, on account of the swelling, and again applied some leeches, and on the 10th I made out satisfactorily what was the state of things. It appeared that besides the fracture of the inner condyle, which was carried inwards and a little upwards, and was very moveable, there was a complete lateral dislocation of both bones of the forearm inwards, so that the external condyle was very prominent, with a hollow below it, where the head of the radius should have been, which was carried deeply among the muscles, so that its head lay in the hollow of the joint, nearly where the ulna should lie, or a little behind this hollow, while the ulna was carried inwards, where it projected unnaturally, and the distance between the outer condyle and the olecranon was nearly doubled. Much pain was felt if entire flexion was attempted, but there was not much prominence of the condyles in front, nor of the ulna backwards, as in the much more common dislocation of both bones backwards, or backwards and at the same time partly to one side. The motion also was different, as here the arm could nearly be bent or straightened, though with pain, which cannot be done when the bones lie behind the humerus. Mr. Keate agreed with me that this was the nature of the accident, and we made a slight attempt to reduce the dislocation, and once I thought I felt the bones slip into their place, and immediately start out again. I once more applied a dozen leeches, and the swelling was sufficiently reduced on the 12th for me to succeed in the reduction by means of the pullies, which I recommend you generally to employ, when a dislocation has existed some time, as effecting your object with much less pain and injury to the patient, by the quiet and continued extension which you can employ without any jerking and irregular movements which take place when you have only the muscular exertions of yourself and your assistants. You saw me make extension from the wrist, and counter-extension from the lower end of the humerus, the elbow being at first nearly at right angles, while extension was made in another direction from the upper end of the fore arm, at a right angle with the line of the two other forces, in order to draw the ulna and radius away from the humerus, while they were being pulled downwards from the wrist and upper arm. I also tried an alteration of the line of extension for a short time, letting the humerus and fore arm lie in the same direction, while the cross force was employed, and I endeavoured to assist the return by moving the ends of the bones upwards and downwards so as respectively to separate the ulna or radius from its position on the back of the humerus. After a few minutes you saw that the bones returned to their places, with an audible sound, as the notes say. An inner angular splint was then applied in front, and a short splint opposite to its two branches on the back of the humerus and fore arm. Some swelling returned after the reduction, which has been much reduced by leeches since. It is probable that there will be some stiffness of the joint for a time, but after the bone has united I hope the motion of the joint will be tolerably good.

---

* The patient left the hospital, shortly after this time, with half the urine passing through the fistula, the abscess in the scrotum being healed; some phosphatic calculous matter having once or twice come through the opening, it was thought better not to do much to the opening for a short time, and the patient wished to go home.

You are commonly directed after fractures and dislocations to adopt regular passive motion in a short time, but it is generally better not to do so, and to be contented with merely satisfying yourself that there is no anchylosis, and not to use motion till all inflammation is gone. You are not unlikely to favour the organization of the effused lymph, if you move the joint while pain still continues; while perfect rest, on the other hand, facilitates its absorption.

III.—The next case offered two dislocations to your notice, and suggests a few observations. John Sims, æt. 45, was admitted on the 7th of May, with dislocation of the left humerus, under the pectoral muscle; the arm is kept flexed, projects out from the side, is supported at the wrist, which he at first supposed to be broken; the arm seems longer than the other; the acromion is promiment, and there is loss of prominence of the deltoid muscle; on placing the finger on the pectoral muscle, or in the axilla, and rotating the elbow, the head of the bone is distinctly felt. The accident was caused by his falling from some steps, on his shoulder, four days ago; he went on the 4th to a surgeon, who examined the forearm, and said it was bruised, and when he again examined it, the next day, the dislocation was undetected.

The notes which I have read to you describe exactly a dislocation of the humerus forwards; and when I directed the man's clothes to be taken off, the accident was so clear, that I saw some of you put your fingers to the shoulder before I said a word with regard to its nature; but it suggests to you the important lesson of entirely exposing parts likely to have been injured: the surgeon to whom he was sent was one who would have known it in an instant, if he had done this; but as it was imperfectly examined, his master was dissatisfied, and sent him here.

I had him immediately taken into the room, and the notes say it was reduced by making extension with the pullies, and by suddenly depressing the arm and drawing it forwards, so as to force the head back into its place; it returned without any snap, and the pain he previously had in the forearm was much relieved; the arm was then confined to the side with a bandage. There was no difficulty in doing this; only remember to throw the elbow forwards while you are holding the neck of the bone with one hand firmly as a fulcrum by which to move the short end of the lever (that is the head) backwards; for want of attention to this, and simply depressing the arm as for the dislocation in the axilla, I have known a surgeon several times fail, the head going upwards again in front of the glenoid cavity.

On the 11th, the shoulder was free from pain, and with good motion; the bandages were removed, and he has continued to have the full use of the shoulder. You will often be surprised in dislocations of the ball-and-socket joints—the shoulder and hip—how little inflammation there is, compared with the elbow-joint, which we have previously considered, and in which repeated applications of leeches were required, while rest alone for three or four days has here been sufficient. But on setting the arm free a new and important circumstance became evident: on examining the hand, which he said he could not use, it appeared that there was free motion everywhere above the wrist, including the rotatory movement of the radius, if the hand was supported, but not otherwise; and he had no power of extension, and very little of flexion of the wrist or fingers and thumb, though the sensation of the hand was perfect. There was no pain or swelling, and no tenderness, but the os magnum and unciforme slipped out of their socket into the palm on the least force being used, without any crepitus, and without any pain; the alteration of the line of the hand with the arm being more than half an inch when the displacement was produced: the posterior ligaments were entire, so that no projection of the hand backwards could be produced.

This dislocation of the first and second row of the carpus from one another is by no means common, though the form of the bones easily explains how it can take place, if a person falls on the hand while it is much bent, particularly forwards into the palm; I suppose, too, that the trapezium and trapezoides remain undetached from the scaphoid bone.

The hand was directed to be placed on a splint, with a pad in the palm, to keep the second row of the carpal bones in their place. But although the joint has become quite firm again, he has not recovered the use of his hand, and I fear it may be some time before he does so. On the 14th it is said he complains of some pain, which extends from the wrist to the elbow, and of slight pain in the shoulder. On the 15th, he can bend and extend the fingers better, and the hand is painful only at night: and on the 18th, he can bend the fingers better. On the 22nd, however, there was some more pain, and for both reasons I ordered a blister to the back of the wrist. On the 20th there was a good deal of swelling and effusion into the joint, to which cold was applied, and on June 8, another blister, and the wrist seems now to do quite well; but although he can bend the fingers a little, his hand drops from palsy of the extensors, and he has scarcely any voluntary power in them.

I cannot exactly explain to you on what this paralysis depends: it is not at all uncommon to see some palsy of the arm after a dislocation of the shoulder, from the inflammation of the nerves in the axilla, excited by the pressure of the head of the bone and the stretching of the nerves by the injury itself, or by the reduction; and I have known this last for many weeks afterwards, and very slowly subside. You would especially expect that the circumflex nerve would be affected, as it passes round the neck of the bone, and that the patient would not be able to raise the arm for a long time by the deltoid muscle. The whole arm is also weakened, from injury to all the nerves in the axilla, but here is perfect motion above the dislocated carpus; — even the supinators are not injured, for he can rotate the hand freely if its weight is supported; but the extensors of the wrist and fingers, and thumb, are nearly powerless, and the motions of the flexors much impaired, and he is positive that it is entirely owing to the accident; and it seemed to precede the time when he had most inflammation in the joint, which has never been severe. The hand drops exactly as it does in a case of palsy from lead, but he tells us he has been never exposed to the influence of it, and the palsy only affects the injured hand, and came on from the injury; and he has no definite sign of lead in the blue appearance of the margins of the gums. There are, indeed, some dark spots, but you often see them in the lower orders of people, from some neglect of cleanliness.

I have at present treated it by supporting the hand as Dr. Pemberton recommended for lead palsy, and which was necessary also for the dislocation; and I have applied two blisters as I have mentioned, but hitherto there is only very partial amendment, and that chiefly in the flexor muscles*.

IV. Another case to which I will direct your attention is that of a poor girl, Dinah Green, 17 years of age, who has been the victim of a barbarous practical joke; for having been told that her mother was dead, the intelligence, which was false, produced such an effect on her mind that she threw herself out of a window five stories high, alighting on her left side. She was admitted May 11th, with transverse fracture of the left humerus, about two inches above the elbow-joint; transverse fracture of the middle of the left tibia and fibula; fracture of the sternum at about the lower part of its middle third; a superficial excoriation of the inside of the left knee, and of the perineum; with great pain and much mobility, but no crepitus in the situation of the left sacro-iliac articulatiom and symphisis of the pubes.

Here there was a complication of injuries, from which it is no wonder that she was insensible for a few minutes after the accident, and was very low and restless till the following day, requiring some æther and opium. I have little to say in detail of most of the injuries, however. The fractured leg is enclosed in stout bandages at present, and is united tolerably firmly. The fracture of the humerus also is uniting, though more slowly than the leg, and there was at first a good deal of swelling in the elbow-joint and around the fracture. The wounds of the perineum and knee have healed; the latter having been followed by some little inflammation and swelling of the knee-joint.

---

* It appeared subsequently that the spiral nerve was probably injured, from pain and tenderness in its course, and several small blisters were applied to it, with the effect of relieving the tenderness of the nerve near the elbow, and of slowly restoring the muscular power, which has gradually returned, though it is not yet perfect.

A fracture of the sternum is commonly easily detected by tenderness and crepitus, as it was here; and it frequently produces no symptom except the local pain, as you may easily suppose when you look at this bone, which was broken in a patient of mine, and in which you may see that the internal periosteum has not even been torn, the bone being only bent back, as the spine was also, and injured the spinal marrow fatally. In other cases the internal parts are much injured; the heart and great vessels may be ruptured, or there may be suppuration in the mediastinum, or injury of the lung. In our patient the notes on the 13th, say, that she complained of pain in the chest at the situation of the fractured sternum, but there is no cough. On the 16th, also, much pain in the chest, but no cough; and it is stated that it was worse during deglutition, the reason for which is not very apparent. This pain gradually went off, and required no treatment.

An injury to the pelvis, however, is generally of more importance than one to the sternum, and it has produced considerable distress to our patient. Fractures and dislocations of the bones of the pelvis being commonly the result of great violence, as in this instance, from a fall from a height of five stories, are necessarily very dangerous, from the injuries to the viscera which they produce, or the great inflammation which follows them; but if these dangers are escaped, they may do very well;—for instance, I have often seen fractures of large portions of the innominatum, as in this preparation, do very well.

The nerves of the bladder and rectum generally suffer in these injuries; and such has been the case here. On the 13th it is said, there is incontinence of urine from an overloaded bladder, and when a catheter was introduced two pints of urine were drawn off of a natural colour, and the catheter continued to be required for several days. On the 18th it is said, she passed her water herself to-day, and she has continued to do so since that time. There has also been some paralysis of the sphincter ani from the same cause, but it has been less regular, and has been felt later than the weakness of the bladder. On the 19th it is said, there is incontinence of fæces, but she passes her urine voluntarily. On the 21st both were passed naturally, but on June 1st, and once or twice even recently, the sphincter has given way involuntarily.

The chief danger in many cases is from inflammation of the cellular tissue of the pelvis, with suppuration, and subsequent peritonitis. In our patient, on the 14th, late in the evening, the third day after the injury, it is said she complains of great pain on the left side of the lower part of the abdomen, which she has had slightly for a day or two, and the house-surgeon very properly gave her two grains of calomel and half a grain of opium every three hours, with saline medicine, and applied some leeches, and fermentation. The next day it is said she feels rather easier, but still complains of pain in the iliac region: she seemed to me, however, to have so calm an expression of countenance, and to be so free from the severer symptoms of peritonitis, that I countermanded the mercury, thinking she expressed more than the actual inflammation justified. On the 18th the pain was more severe again, and extended across to the other side of the abdomen, and I felt afraid myself that there was a good deal of cellular inflammation, which might spread to the serous membrane if unchecked, and I gave her one grain of calomel and a quarter of opium every six hours, and the next day gave it twice, and then omitted it, the pain being much less, and not having since returned in the same way, though she has made some complaint occasionally. I understand, however, from Dr. Thomas Chambers, that her attention has been much directed for some time to the abdomen, and that she herself fancies that she has Dr. Baron's disease of the peritoneum, of which in reality there is not any sign, and perhaps therefore there was not any inflammation of importance. She is now, however, going on well, except that she has unfortunately a slough on the back, caused by her being very thin, and unable to move herself, and hardly able to bear being turned at all to either side, on account of the injury of the pelvis; indeed, she cannot lie on the left side even for a short time.

It is probable that dislocations of the pelvis are not so dangerous in themselves as fractures of these bones, unless they have been produced by a greater degree of violence, causing injury to the viscera, or great internal hæmorrhage and inflammation. At all events two dangers attend a fracture which do not arise from dislocations. A man was brought to the hospital from some distance in the country for a fracture of the thigh, which was all the injury he was known to have suffered; on the journey, however, in a cart, he was seen to become very faint, and only lived a short time after he reached the hospital. On examination, it was found that there was a fracture in the usual situation across the transverse ramus of the pubes; and in the movements of the cart probably one of the fractured ends of bone had punctured the femoral vein, and the blood had thence been driven with great force into the cellular tissue of the pelvis and abdomen, behind the peritoneum, reaching as high as the diaphragm, and between the folds of the mesentery to the intestines. The other danger from a fracture is more common, and is not unfrequently fatal, the fractured ramus of the pubes tearing the urethra, and causing extravasation of urine, and suppuration and necrosis of bone, as in the boy from whom this preparation of several fractures was taken.

A dislocation of the symphysis pubes not unfrequently happens, and I have more than once seen rupture of the bladder occasioned by it, and often some blood escapes with the water for a day or two, the two bones being as completely torn asunder as in the section formerly practised in parturition. Dislocation of the sacro-iliac joint requires a great degree of violence, and is very often fatal; and is also often accompanied by fractures of the innominatum; and sometimes both of these joints are dislocated in the same case, with or without fracture. In this patient the mobility of the left innominatum was so great, that I could move it upwards and downwards nearly an inch, making the opposite pubes or the sacrum project; and I conclude that the joints are dislocated, as there is no crepitus when the bone is thus moved; but as the fragments get separated when broken, the crepitus is not always felt, and there may be one, therefore, in addition to the dislocation. Sometimes you can cause the crepitus by pressing the two sides of the pelvis towards each other, so as to bring the fractured portions in contact; but I did not perceive it in this case.

From the great violence necessary to produce these dislocations or fractures, the accident is of course often fatal; but they do occasionally allow of recovery, even when severe, as I hope will be the case in our patient. I remember some years ago a man being brought to the hospital, who had been run over by a cart, in whom the right innominatum had been dislocated from the sacrum, leaving this bone projecting considerably. Being placed on his face, a good deal of force was used by several persons while the innominatum was drawn outwards on one side, and the pelvis held steady on the other, and the displaced bone returned to its place suddenly with an audible sound. There was incontinence of urine and of fæces, from paralysis of the sphincters, with a good deal of blood in the water. The patient had great pain in the abdomen, and inability to use the legs from the pain it occasioned, and from partial loss of power over the muscles, and much anxiety and distress; but in a short time the urine became clear, and the patient perfectly recovered.

So also with severe fractures without apparent dislocation. A man, for instance, was under my care about the time when some murders in Edinburgh, connected with our profession, led to the introduction of a new word in our language; he dreamed one night that he was being *burked*, and getting out of bed, fell from the top to the bottom of a house, through a skylight, which in some measure broke his fall, or else he probably would have been killed. He was at first pale and insensible, and then remained for some time exceedingly low and depressed, with great effusion of blood in and around the pelvis, which was broken across one side perpendicularly. Some hours afterwards the catheter drew off about a table-spoonful of urine and blood; then none whatever was found, so that I feared a rupture of the bladder; but it was in fact suppression of the secretion, and the next day two or three ounces of fœtid urine, loaded with sulphuretted hydrogen, were drawn off. The power of expulsion returned on the third day; then it ceased for a few days more, after which he made water in proper quantity voluntarily. The legs were paralysed and nearly insensible for some time, and he only slowly regained the power over them in six or seven weeks, when the bone had united. He had also much inflammation, and was threatened, as in our patient, with peritonitis, but finally got quite well. I am in hopes, therefore, that our patient, having gone on so well hitherto, notwithstanding her complicated injuries, will also recover in time. This favourable condition described on June 16th did not continue, however. On the 22d she had a slight rigor; on the 24th another, which lasted an hour and a half. On the 28th, rigors continuing, she began to complain of cough, and afterwards of pain in the chest and difficulty of deglutition, and she died on the 30th, having some convulsive twitchings of the face before her death. The post-mortem appearances were as follows:—

Thorax.—The right lung was, towards its posterior part, loaded with red frothy serum; in other respects this organ was healthy. In the left pleura there was a small quantity of lymph recently effused, and adhering to the pleura, covering the back part of the lower lobe of the lung, which here presented a well-marked specimen of partial consolidation from red hepatization. Several small secondary deposits, the centre of which was softened, also existed in various parts of this organ, the remaining structure being healthy. The heart presented nothing remarkable.

Abdomen.—The viscera contained in this cavity presented nothing remarkable; but in the left iliac fossa, and in the neighbouring parts, were evident traces of an extensive extravasation of blood. The left os innominatum was extensively fractured, its iliac portion being broken up into several fragments, which were firmly but irregularly united to one another, forming in some places large irregular projections. The pubic portion also presented a fracture running across its transverse branch, and another one at the union of the rami of the ischium and pubes: these fractures were not united, and a small portion of matter was found between the fragments. The sacrum and ilium were widely separated from one another at the left articulation, and some matter was found between these bones.

Left inferior extremity.—The left leg had been fractured towards its lower part: both bones were, however, firmly and regularly united, but a small portion of the tibia was necrosed, and a quantity of foul matter was found in the neighbourhood, particularly towards the back part. A quantity of foul matter was also found in the left knee-joint, with some small clots of blood, and the cartilages were partly absorbed, but not to any great extent.

Left superior extremity.—The humerus was broken at its lower third, and the fragments of bone were partially riding over each other, being united by soft tissue, in which a deposition of bone had begun to take place. The extremities of the fractured portions were rounded off.

Right forearm.—A large quantity of foul pus was found in the subcutaneous cellular tissue of this region.

A CLINICAL LECTURE ON

SUMMER DIARRHŒA, CHOLERA, AND TYPHUS FEVER,

Delivered at the York Medical School,

By Thomas Laycock, M.D.

Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine.

The diseases predominant now are particularly characterised by functional disorders of the alimentary canal. They are summer diarrhœa, cholera morbus, and typhus fever. I put them together, because I think they belong to one family, and have a common origin.

We have not had many cases of simple diarrhœa or "bowel complaint;" it is very prevalent in the city nevertheless; but people are attacked so suddenly and so sharply that they have not time to send for "the doctor," or to get a ticket for relief at the Dispensary, so they run off to the nearest druggist's shop for "something for the bowels," and the druggist gives them a chalk mixture or tincture of rhubarb, or, if he is a bold man, will even administer calomel and opium; and the treatment answers very well in most cases,—but not in all.

The diarrhœa, as we have seen it, comes on with febrile symptoms; there is headache, thirst, hot and dry skin, "chilly creepings" down the back, small rigors. The fever is a febricula, and lasts perhaps 48 hours. During this period there is a smart diarrhœa; you seldom see the evacuations in these cases, but they are usually reported as being bilious. After numerous dejections the diarrhœa abates; either medicine is taken, or it disappears spontaneously. Sometimes, however, the intestinal excitement is unrelieved, and there is tenesmus, griping colicky pains, and other dysenteric symptoms. These symptoms are, however, generally relieved by medicine, as the patient becomes alarmed, and applies for medical aid, and with that he gets well. In a few instances the diarrhœa continues without any well-marked dysenteric symptoms, but typhoid symptoms appear, and you find that the case ultimately is typhus fever.

Cholera morbus (the "plague in the guts," of our forefathers,) is another and more active form of the diarrhœa I have just described; but the irritation is fiercer and more widely extended. You have violent vomiting and prostration of strength superadded to the diarrhœa, symptoms common to all violent irritations of the abdominal viscera, but particularly of the stomach and intestines. In other respects its course and duration is the same as of the diarrhœa.

With regard to the purging I need say little; it is a minor affection included in a consideration of the major disorder—namely, the typhus fever. We have had several cases of this disease under notice, and the phenomena we witnessed are like the following. The patient is generally supine, with the arms and hands out of bed; the complexion dull and muddy, the lips dry and parched, the cheeks flushed, the eyes open and dull, the skin of the forehead wrinkled; giving an expression of anxiety and peevishness to the countenance. The bed-clothes are in disorder from the restless tossing about of the patient, and there is probably a fæcal odour in the room in consequence of the frequent stools. If you say to the patient, "how do you do?" he will probably answer occasionally "how do you do, sir?" in a husky tone,—just, in fact, re-echoing what you say. And so, also, if his attendant make a remark, and he hear it, he will re-echo that remark. But perhaps you will find that the patient is rather deaf, and cannot hear quickly. On taking his hand you will perceive that it is tremulous, hot, and dry; and hot with a peculiarly scorching sensation to you, with a pulse generally from 95 to 125 per minute. When, however, there is much stupor, and the deafness is considerable, you will find the pulse slow,—sometimes slower than in health. Asking to look at the tongue you will observe that the patient tries to wet it, and also his lips, before he puts it out; it is adherent to the roof and sides of his mouth, and when seen it has a dry brown appearance with a reddish glazy streak down the middle. Proceeding to inquire into the condition of the cerebral functions, you will on asking how the patient has slept, be told that he has had little or no sleep, that he has "wandered a good deal," meaning thereby the condition technically termed muttering delirium. "Did he ever try to get out of bed, or was he violent?" you ask. The answer will probably be, that once or twice he got out, but was easily managed and was got to bed directly again; and perhaps it will be added that once or twice he had "wandered" during the day. All this time (you will observe) the patient will be listening attentively, with a vacant sort of look, as if he was bothered somewhat, or was not quite awake, and you will remember the re-echoing of your previous questions. All these symptoms indicate disordered cerebral action,—and of the surface of the hemispheres, not of the base. In a post-mortem examination of such a case you would probably find that the arachnoid membrane covering the cerebral hemispheres was opaque. Passing from the head to the thorax, you will most probably notice a shortness in the breathing; but the state of the breathing depends very much upon the previous state of the heart and lungs. Very often, however, there is more or less bronchitis in typhus; I think it is as essentially a part of the disease as arachnitis. But you will not find there is much cough, even if your patient had had symptoms of phthisis previously; the pulmonary irritation is hushed; the morbid condition of the brain does this more effectually than a sedative. This is an important point to remember,—the state of the brain in typhus will mask the cough and thoracic pain in structural diseases of the lungs.

The alimentary canal next receives your attention. The peculiar tongue has already warned you that there is irritation of its mucous membrane, and you find that while the patient is absolutely without an appetite, and will eat nothing whatever, he is tormented with excessive thirst, and the moment you allude to it he or his nurse will ask you earnestly what must be drunk to quench it. Thirst is usually a pressing symptom; the state of the brain rarely masks that painful sensation. Sometimes there is nausea, but not often, or even in the majority of cases; sometimes vomiting, and then every thing is rejected. The bowels are frequently moved—there is diarrhœa—and occasionally distressing tenesmus, and distressing tenesmus and obstinate nausea and vomiting generally go together. The urine is small in quantity, very brown, and loaded with urinary salts, is of a high specific gravity; and occasionally there are pelvic pains, menorrhagia, or, at least, some coloured discharge.

These are the *average* symptoms of the fever as seen in York, as we have seen it in the cases under our care recently. On exploring the different organs you will find complications in each case. But there were other and more remarkable symptoms observed during last autumn, and during the winter, to accompany the fever; and these symptoms plainly did not belong to individual peculiarities or previously existing diseases, but were in some way connected with the fever, because they were witnessed in the majority of the cases. The symptoms I allude to were consequent upon disorders of the cerebro-spinal axis, but principally indicated irritation or functional derangement somewhere about the base of the brain: I say "somewhere about," because I cannot say exactly where. During the whole of that period nervous disorders (that is to say, diseases of the nervous system) were very prevalent. Every practitioner remarked it who had an ordinary run of practice. I thought at one time that they were dependent on the state of the potatoes then eaten. Tic douloureux, for example, and tooth-ache, (or rheumatism of the face, as it was popularly termed) were very common. There was a good deal of chorea too; I saw more cases in three months then than in the previous three years. Also many cases occurred of lowness of spirits; of arachnitis; of mania, &c. Now this predominancy of nervous disorders, from whatever cause it arose, was the *genius epidemicus*, and at its commencement baffled me very much in my diagnosis. The epidemical "*genius*" is a very important point to consider; you should look for a change in it with a change in the temperature or the seasons, although I do not think the change of temperature is the sole or immee influence at work. All the best writers mmend a careful attention to it, how- , and when it begins to change that you ld carefully grope your way to a know- e of it. You must watch earnestly and iously until you have discovered its le "form and pressure."

ow in last autumn and winter the cere- symptoms were various; persistent ium with wakefulness was one. I had fever patient who was in a half somnam- stic state for a whole week. He got and walked about; he said, when his e of health was inquired after, that he "very well." He had a cough before attack: that left him during it. He ld say he had had a very good night, then his nurse would smile, and observe, hy he has'nt slept a wink, sir!" and he ld answer the remark by saying, "Per- be did awake once or twice, but he ot." At last he did really sleep, and h he awoke, was rather suprised at the matters had taken. That week in his was a blank; he had no memory regard- it. There was one female had the ous symptom of a sensation as if she were ng backwards, and sometimes that she wrong side up in the bed. She often ld get up for the purpose of setting her- right. One patient, a little girl, had e chorea. Another, and the most curious mple of these perverted sensations, was of the wife of a tradesman, whom I nded conjointly with her ordinary medi- attendant. She felt as if her body was led into two halves, and that the one was separated from the other. And t heartily she laughed one day, although ill, at this strange sensation.

he course and duration of the fever is, re have seen, pretty determinate. None our cases have gone on longer than a th; one only has continued a month, that from peculiar circumstances. One on who visited that patient (a female int in Long Close Lane) observed to me he thought he had detected the reason er asthenic symptoms—for she had a gh on the right shoulder from resting n it, aphthous mouth, and very great lity. He found that she had been freely at the commencement of the attack. did not inquire who did it, because the ment cannot be praised. It is very able that the loss of blood reduced the ting powers of the system; nature, with ris medicatrix, was doing very well, no t, at the time of the bleeding, and she d have finished her cure without the h, without the aphthæ, and in the ordi- period (for the fever is a "twenty-one fever), if she had been let alone.

ow, a twenty-one day fever is a tertian, ther the critical days of the fever have a tertian type. You would have paroxysms of a tertian on the 1st, 3d, 5th, 7th, 9th, 11th, 13th, and then the fever would end; that is, after the 7th paroxysm, and the amendment would be on the 14th day. And the 14th day you will find distinguished by an improvement in the symptoms in the fever we have in York; I noticed it particularly in the case in Duke of York Street. That patient was very deaf, was in a sort of stupor, or if awake was peevish and irritable. She suffered much from diarrhoea. I found a decided exacerbation occurred; I counted back from that, I made very particular inquiries, and I guessed (for it was only a guess) that that decided exacerbation was the seventh from the beginning. Now it was so bad that the patient's friends declared they had lost all hope of her recovery, and she was certainly in a very precarious state; but I said she would get better, for I found, on the day which I took to be the fourteenth, that the skin was slightly moistened, that the heat was less pungent. The nurse shook her head when I said her patient would get better. Eleven days after she was down stairs, and her son now occupies her room sick of the same fever.

Some practitioners say that the doctrine of critical days is a fancy: a friend told me so not long ago. I answered, "Then, my friend, you are wiser than Hippocrates and all the big-wigs who have believed with him for the last 2000 years." His answer was, that he had never read Hippocrates and the big-wigs. So I begged of him to tell me what a critical day was. I knew that, as he had never studied the subject (for the Treatise *de Diebus Judicatoriis*, in the Hippocratic writings, is the best ever written on it), he could not; and he knew it, too, for I had to press him to give a definition. At last, he replied, "that a critical day is the day when a person is in a critical state, when he will have some marked change, as a sweat, or a purging, or when he is in great danger, and you do not know which way the case will turn." He was rather surprised when I said that, on the contrary, a critical day is the day on which you *ought* to know how the case will terminate; it is the day on which you may *form a judgment* as to the probable course of the disease. I know the word critical has been popularized, and means dangerous, as used by some people—newspaper writers in particular. But the origin and original use of the word should be noted; it will do you no harm to look in upon Hippocrates, and consult him on this point. If you do this you will find that crisis is a Greek word corresponding to the Latin judicatio, and the English judging: it has no reference to danger at all. It means, medically, the act of mind by which you make certain deductions from certain morbid phenomena happening at a certain time; a process by which you infer, 1, the probable duration and termination of disease, and 2, the symptoms likely to appear on certain future days. Now, if you have a case of fever in which jaundice and hiccup appeared on the fifth day, it would be fatal, probably, on the seventh day.

In a paper published in the 12th vol. of the LONDON MEDICAL GAZETTE, Dr. Latham objects to the doctrine of critical days. He says, the evidence in its favour is imperfect, and he gives a table of the duration and termination of 297 cases of fever. Of these, 108 are reported as being prolonged beyond the 28th day, and 33 of the 108 beyond the 42d day. I am inclined to think that no specific or epidemic fever can be prolonged beyond the 28th day: there may be such an one, but I never saw an example. You may have irritative or hectic fever continue after the termination of the true series of febrile phenomena, but this ought, I think, to be considered apart. It is a fever consequent upon the structural changes which specific fever induces—the *sequelæ*, as they are termed. I think, then, we should strike off these 108 cases; and I think, too, we must either doubt Dr. Latham's exactitude of observation (although this be a heresy) in some of the other cases, or conclude that there has been something very peculiar in the type of the fever. At all events, if Dr. Latham be right in his observations, and the fever has been of the kind termed a twenty-one day fever, other observers must have been quite wrong. Dr. Tischendorf, of Langenfeldt, in Vogtlande, took notes of the critical days in 100 cases of nervous fever. I extract his numerical statement from Schmidt's Jahrbücher, Vol. 21. Of the 100 cases 19 died; of the remaining 81 the termination was as follows: on the 11th day, 8; 14th day, 36; 21st day, 34; 28th day, 5. But he reports none as prolonged beyond the 28th day. I am inclined to think, from a personal acquaintance with German pathologists, that this nervous fever is identical with the fever of which we have witnessed some examples lately. I could multiply numerous proofs of this kind from almost every quarter, and I think positive proofs are always to be received as of greater weight than negative proofs. You will therefore do well to look out for critical days, and I can assure you, from my own knowledge, that a determination of them will be very useful to you. I will give you an example. I was requested by a neighbour of mine (who, although a surgeon and apothecary, practises rather as an amateur than as one of us), to visit a humble friend of his under his care. The case was one of malignant scarlatina; the patient was the father of a numerous family, and my friend was very anxious about him. On the 13th day of his attack (for we ascertained the exact order of the febrile phenomena), he was very bad indeed; he could not swallow, nor speak nor hear, nor, in fact, take notice of us. He seemed to be on the point of death, and properly he ought to have died next morning (the 14th day), about 3 or 4 o'clock. "Well," I said, "it is all over with our patient, but there is one slight chance left. If we get him over to-night, we shall get him over the last paroxysm; to-morrow may, perhaps, see him rally." So my friend sat up with him all night. He administered stimulant enemata, applied terebinthinate epithems, kept the feet warm, moistened the tongue and throat from time to time with stimulants; in short, helped on the flagging powers of nature; and nature triumphed, the man got well, and is alive yet. This case has a double value: it illustrates the doctrine of critical days, and it shows the necessity, when you go forth to combat the enemy, of having this motto writ on your weapons, "*nil desperandum*."

You will wish to know how the critical days are to be observed. The mode will depend upon the kind of fever. In the exanthematous fevers they are very clearly manifest; if you will read Dr. Craigie's history and description of small-pox you will find that the critical days in that fever are the fourth, seventh, eleventh, and fourteenth. In counting the days you count the day of the first rigor, or febrile paroxysm, as the first day. Fevers, like agues, have varying types. You are aware that a quotidian in spring or the beginning of summer may be a tertian at the beginning of autumn, and a quartan during the winter. In agues the remission of the febrile phenomena is complete; it is an intermission. In a remittent fever the remission is less complete; the symptoms do not disappear quite, but are alleviated only. In a continued fever like typhus the remissions are still slighter, and the alleviation of the febrile symptoms still less. Now, in proportion as the remissions are less distinct, careful observation becomes the more necessary, if you would distinguish the critical days. Supposing ou typhus fever have a tertian type (which i has at present, but in the autumn it may b a quartan) your patient will be worse on th third, fifth, seventh, ninth, eleventh, thirteenth, seventeenth, twenty-first days, and h *may* also be better on these days, for th period of the day on which the exacerbation takes place is not the same in all cases, no on each day in the same person. If th exacerbation be in the morning or at noon there will be a slight remission toward night. If it have the quartan type th exacerbation on the critical day will *proba*

ween 4 and 12 o'clock, P.M., and
12 o'clock there will be an im-
e of things. In a fever of this type,
noticed that the critical days are
econd, third), *fourth* (fifth, sixth),
ghth, ninth, tenth), and *eleventh*.
ries has, you will see, an interval
ear days. Now I do not know
ly this happens; it is so, however,
k it may be explained by the ten-
ch fevers have to change gradually
of periodic exacerbation. Some-
hour of accession is an hour or
at each successive recurrence,
an hour or two earlier, but
e former. Now in the case of
l other continued fevers, anything
cal evacuation is not necessary to
The remission may be characte-
ly by less heat of skin, less thirst,
m, an hour or two of quiet sleep,
harge of urine, or a slight diapho-
it may be that you just simply
patient has a feeling of being

tment of these affections is very
he diarrhœa should not be stopped
Let the bowels be well cleansed
purgation: you cannot say what
hing is carried out of the system
little magnesia or lime-water, or,
ated dejections, the cretaceous
with opium, may be given.
u find the diarrhœa become urgent
stop it by calomel and opium. A
ch may be given at once, and half
grain doses at intervals varying ac-
circumstances. If there be much
r dysenteric symptoms, an opiate
l allay the incident excitor irrita-
he rectum. In worse cases you
e the enema of acetate of lead,
iv., and acetate of morphia, gr. j.
h an ounce and a half of distilled
his with any simple diluent will
successful.

egard to the typhus fever which
nes set up after the diarrhœa, the
ment is that called expectant.
t take care that the patient have
fresh air, for he is hot; that he
ty of some cool simple diluent to
he is thirsty. Let him have a
hange of bed-linen, and let him be
sponged or dowsed all over with
, if that be practicable. Nature
ently, "Cool my burning hot
ench my great thirst." Indeed,
ake it as a useful general rule that
greeable to the patient is useful;
inquiries are made about his diet
ery safely allow him to take what
He will not take much of anything.
n the attendants not to give him
like, because there is a wide difference between the ideas of the two parties. The sick man is guided by his instincts; the attendants often by some absurd theory. But it is well to make their theoretical notions useful in making them attentive to your directions. The nurse will generally sponge oftener if you give her a hint that she will thereby cool the fever, and open the pores, (the theory of closed pores is quite popular); and when diaphoresis takes place she will review her labours with much self-gratulation as the prime cause of the "opening of the pores," and you will come in for a large share of the credit too. The common febrifuge, the liquor of acetate of ammonia in camphor mixture as a vehicle, is as good a medicine as you can give.

When the head symptoms are urgent the cold douche is the best remedy. Give plain directions as to its use. Let the patient be wrapped up to the neck in a blanket, and direct that three or four pitcherfuls of water be poured upon the head from the height of a few feet, and to be repeated three or four times a day. Counter-irritants in extreme cases may be applied to the nucha, or behind the ears. The irritation of the bowels ought not always to be effectually checked, because I am inclined to think that it acts as a counter-irritant; but when it is manifestly debilitating the patient you must put a check upon nature's movements: she may carry her irritation too far. Sometimes the common cretaceous mixture is sufficient for this purpose; in other cases, where there is an aphthous condition of the mouth and fauces, you will find the nitrate of silver a very useful remedy. An eight-ounce mixture, with two grains of the salt dissolved in distilled water, to which a few minims of dilute nitric acid have been added, is a good preparation: an ounce to be given to an adult every three or four hours.

After the fever has abated the diarrhœa sometimes continues, and the patient gets no strength. Now, in such cases, small doses of sulphate of quinine, with the sixth of a grain of sulphate of copper, dissolved in any suitable vehicle, to which a few minims of dilute sulphuric acid has been added, plain water—*aqua fontis* is the best—may be given with advantage. If the stomach will bear the remedy it will act well. Acetate of lead, combined with opium or acetate of morphia, in pills made up with bread-crumb, is also a useful sedative in these cases of chronic diarrhœa: these remedies may also be used in the form of an enema as I before mentioned.

Now I have said nothing about the pathological anatomy of these diseases, for, indeed, I have not yet had a fatal case, although several cases of typhus have been very near death. Somehow or other they have struggled through almost unexpectedly. I hope you will never give a fever patient up, however prostrate he may be, or however hopeless his case. You are bound in honour and duty to war with death to the last gasp. If I were to give you the pathology from books I do not think I should occupy our time well, but I feel I ought to say something about the etiology,—the doctrine of the causes, or antecedents of cholera and fever. The tocsin of a social revolution has sounded, and in a few years the medical professsion will, I hope, be in battle array against all and every influence injurious to the health of the people. The time will soon come when the rising generation of practitioners may, if they will, take a high and brilliant position in the body politic. If they please —if they adopt the right method—they may make themselves necessary to the success of statesmen, and may state their own terms as to the price of their support. There is a gigantic power now dormant in the medical profession, and you and the men a little before you in age and standing will have to decide how that power is to be directed. That power will be inevitably misdirected unless students and practitioners get acquainted with public hygiene or state medicine in all its branches. The etiology of epidemics is one of the most important of these branches. The reform of the quarantine laws and the establishment of a health-police throughout the country will be perfect in proportion as we are perfect in our knowledge of this question.

Well now, what is the cause of cholera, summer diarrhœa, and typhus, in its various forms? I have already observed, that the leading phenomena indicate disorder of the alimentary canal. This is a matter of popular observation, and has designated the causes in the popular mind. People will say, bowel complaints are very prevalent just now with people eating too much fruit. But you will find that many of your poor cholera patients have had no fruit to eat: they cannot afford to buy it. Salmon gets so plentiful and cheap in the summer that thrifty housekeepers pickle it, and some people attribute an attack of cholera to eating pickled salmon. Next, stone fruit comes into season, and then plums, as the most plentiful fruit, get the blame. "It is the plum season" is the curt and satisfactory explanation of an epidemical diarrhœa. If, however, you inquire into the dietetic habits of your patients you will find that the majority have eaten neither gooseberries nor strawberries, nor cherry-pie; nor pickled-salmon, nor lobster salad, nor plums. Nevertheless, errors in diet are amongst the most frequent of the *exciting* causes of diarrhœa, cholera, and typhus; they are often the *immediate antecedents* of an attack, but not the true pathological cause. For my own part I can say that fruit n
taken is a most excellent summ
believe it is in reality a good pr
against the summer epidemics:
myself as such, and I have nev
fered an attack of either cholera or
that has been at all troublesome.

Now there is a much more effi
much more probable cause th
pickled salmon or plums. U
streets of our best drained towns
there is a widely-extended ma
miasmata. That magazine is hid
view, yet it is ubiquitous. It ent
court and alley, and during the hea
mer it is put into fearful activity,
and day evolves many thousand cu
of foul air. And that foul air is
perceptible to the senses, Nobod
it is evolved and ascends from eve
hole, until previously to or dur
when it is held in solution in th
vapour of the atmosphere, and
perceptible to the sense of smell.
will answer you, if you inquire the
of their house drainage, "Oh, it is v
the drain in the back-kitchen nev
except against rain; it is very sweet
Yet night and day a miasm is
from the cess-pool called the str
through the sink-hole in that "sw
kitchen," and infecting the air of
house. But whether it stinks or
very little consequence; it may
smell, or no unpleasant smell, an
deadly poison. There is no sme
carbonic acid gas, and it is only an
odour of garlic that characterizes th
arsenic; yet both these are dead
What is offensive to the sense of
injurious to the system or to some
that is generally true; but the c
not true; you cannot say that wl
offensive to the sense of smell is *not* i
I hold it, then, as an established
that the malaria arising from the ab
sewers, especially in the metropol
water-closets and crowded chu
abound, is the fruitful source of ou
epidemics; and you may rely upon
wherever you have cholera or
epidemic, there you have a source o
I always enquire into this matt
always give the sufferer or sufferer
tical lesson in hygiene, whether the
or rich. You find a family suffe
cholera or fever, and there is a filt
close by. You say to the head of th
"Would you like to know why yo
the cholera? It is that abominabl
The answer will be, "It is rea
nauseous, sir, but our landlord wi
thing." "Well, then," answer,
pound or two a year more rent, in a
spot, where the landlord will do so

ll more than save the sum in escaping
s." Now, this is a way of effecting
y reform without an Act of Parliament,
ery effectual way too. I understand
ietor of cottage property in this city
d lately to the magistrates against
essments to the poor's rate, on the
that, since I had reported the locality
ouses to be unhealthy, his rental had
liminished. I do not know that it
; if it were, I think it is matter of
that the value of property should be
teriorated; I should be sorry to do
g of the kind; but I should think it
of much greater regret if the health
nants was deteriorated, and the lives
children destroyed, and I, knowing
se thereof, and consulted by them,
e cause a secret, that his property
not be deteriorated. It is the chief
st practical duty in this world to
our duty and to do it; and when you
o evils presented to you for your
to know which is the least, and to
that. The duty and the least evil
r enough here.

philosophy of epidemical disease is a
l profound subject; it is too extensive
linical lecture, but there are a few
hich I will bring under your notice,
must be armed with knowledge, or
ll not be able to combat popular
e and ignorance. In the first place,
the miasmata of drains act on the
tion and develope the morbid pheno-
e have discussed? How is it that it
the bowels and nervous system so
ly? Let us look out for some analo-
d see if we can derive any practical
tion therefrom. Now, of course,
iasm is a poison; in small-pox,
fever, measles, hooping cough,
, hydrophobia, &c., &c., there is a
poison acting on the system, and
pon a determinate class of organs.
all affect the mucous surfaces, yet
ear on one portion of the surface
an on another, and when they ap-
the skin, they each select certain
es of the skin. We may fairly infer,
at the miasm of cholera and typhus
this law of selection or affinity; it
rincipally the mucous membrane of
stinal canal; indeed you will find
riters designating its prolonged
ena as "abdominal" typhus, be-
re is ulceration of the Peyerian glands
es. You may next inquire, why do
ous morbid poisons affect one struc-
ner than another? The answer to
tion may be found in the answer to
question,—Why do the various
s and excretions pass off by their
e emunctories? When that ques-
swered we shall be able to answer
the other. In the meanwhile I think we may fairly infer that, if a morbid poison resembles the excretion of any particular organ, it is not improbable that it will have an affinity for that organ, or for the tissues with which the organ has a functional or anatomical connection. Now, with regard to the intestinal canal and the functions of its mucous membrane, there is a diversity of opinions amongst physiologists. It seems probable, however, that gases of a lethal quality—gases that if retained would be poisonous to the system, and are purely excrementitious—are excreted from this mucous membrane, such as the compounds of hydrogen with carbon and sulphur. Now, these are just the sort of gaseous compounds which are given off from town-drains, perhaps intermixed with other gases, but certainly of the same family, for they arise from fæces, and therefore likely to take the same course as the preceding when they have accumulated in the system. I think, however, that we may fairly infer that there is a specific difference (not a generic) between the miasm exciting cholera and typhus, and the miasm exciting yellow-fever, or the jungle-fever, or ague: they seem to seek another outlet, and therefore affect another class of organs—as the liver, for example. In tropical climates this organ is always unusually active. You may observe, too, that the action of the miasm of cholera and typhus is analogous to that of purgatives given medicinally; in fact, in large doses it acts just as a violent purgative, but ordinarily it is not taken in large doses, but has to accumulate, and when it has accumulated it may not produce any morbid results until the intestinal mucous membrane is placed in a morbid condition by some efficient cause, as the errors of diet I mentioned a while ago, or the depressing passions,—as fear, which is a very effectual purgative sometimes. When the Asiatic cholera prevailed, people were warned against fear, and against taking saline aperients; and very justly, because they placed the intestinal mucous membrane in a morbid state, and thus that subtile poison which came to us from the filthy, ill-ventilated, Asiatic cities, and is said to be coming again, had scope to act; the barrier of healthy resistance was broken down. I might as well observe that probably the miasm of Asiatic cholera is generically analogous to that of our own cholera, but is more virulent, as most tropical poisons are, whether animal or vegetable. The proper and sure method to exterminate the Asiatic cholera is to introduce a stringent health-police into the cities of Asia. We shall never be absolutely safe until this be done.

Is typhus-fever or cholera infectious or contagious? Here is a knotty point. Opinions have been pretty equally divided upon it, and maintained with a warmth that is really astonishing. You will find the truth probably in the opinions of both contagionists and anti-contagionists. It is as certain that epidemic fevers arise from a miasm diffused in the air, as agues and tropical-fevers; but I think it is equally certain that some, if not all of these miasms, may act so upon the fluids of the organization as to produce miasms, which, acting on another person, shall excite either a disease like the original disease, or another altogether dissimilar—a *tertium quid*. We know, certainly, that morbid poisons may be so modified. Scarlatina, or small-pox, may be either malignant or mild; if they attack a person living in impure air, and personally unclean, the infection, although mild as regards the person from whom it was communicated, will be malignant in the person affected, and the infection from him will be malignant. The converse will happen. The malignancy of miasm may be diminished by repeated transmission through healthy persons. Vaccinia, another example, is a very different disease from its parent, whether that parent be "the grease," a disease of the horse's heel, or variola. I believe there is a good deal of evidence in proof of the idea that syphilis is a modified form of the leprosy of the middle ages; and I rather think that a careful observation and inquiry would show that other contagious or infectious diseases undergo a similar metamorphosis—perhaps that all do—that it is a general principle. However, you had better in practice consider these fevers contagious or infectious, and that an inorganic miasm, especially that arising from decaying animal and vegetable excrementitious matter, may be changed into an organic, in passing through an individual whose condition is favourable to the metamorphosis. Such, I think, was the origin of the Eclair fever; malaria passed through the bodies of a crowd of filthy negroes, and was changed into a morbid poison; and there would have been desolation and mourning, I think, not only in the united kingdom but throughout Europe, if the miasm of that fever had escaped from quarantine.

Now infection is not absolute under any circumstances; it is *always* conditional, and it is conditional in various degrees. Some morbid poisons are more subtile than others; they require a greater degree of dilution, for you may dilute them until they are innocuous. If the streets of London, or of our large towns, were as narrow as they used to be in the middle ages, when epidemics were so rife, I believe we should have fevers as bad now as they were then, for the only difference is that the fæcal accumulations of the people are collected a little way under the surface instead of upon it. There is the same amount of miasm, but more air passes over and through the streets, and dilutes it. Infection is conditional, too, as regards the recipient; a person, for example, who has once suffered, enjoys an immunity from any further attack. This is the case with many fevers—almost all, if not all, the exanthematous fevers, including exanthematous typhus. It is so also with yellow fever of a particular type, and some authors have made the same remark respecting the Asiatic cholera and the Levant plague. Probably the law rules more extensively than it has been observed to rule, and thus we may explain some of the fiercely opposing statements of the contagionists and the anti-contagionists. Infection is conditional, too, on the state of health of the organization that receives it, or even of the organs for which it has an elective affinity. Twenty persons travel across a marsh; five have ague two days after, five seven days after, five three weeks after, five not at all;—all get the miasm, nevertheless, at the same time. And no doubt the miasm of our drains, and of the diseases it excites, while it chiefly affects persons already subject to diarrhœa, in thousands and ten thousands of instances passes quietly through the system just as other poisons will (mercury for example), and never produces its specific effects. People very often adduce this fact as a proof of the innocency of miasms and morbid poisons;—they will quote themselves as examples of persons who have never suffered, although often, nay perhaps continually, exposed to infection. All you can answer is, that they ought to thank Divine Providence for an organization such that the poison is quickly thrown off. Why this happens is yet a mystery in physiology and pathology. I never yet heard or read an hypothesis which satisfactorily explained to me why a person who has had variola or vaccinia once, never suffers from them again. It is idle to say that the poison is not taken into the system; I suspect myself that the immunity is consequent upon some change induced by a previous attack in the elective affinities of the secreting organs; the miasm is, perhaps, excreted as soon as received, just as bile or urea is excreted as soon as formed. Why, I have no idea. But you have the facts of immunity from a previous attack—of immunity from habitual exposure—of immunity from a congenital organization — of immunity from excessive dilution — of immunity from unknown causes;—and unless you bear these and similar facts in mind, in your investigations of the laws which regulate the origin and spread of epidemic diseases, you will be continually involved in contradictions. During next session I shall, I hope, have an opportunity of stating the character and nature of these laws in considerable detail, with some new views and facts, and with strict reference to practical results.

It is well to know the topography of your professional work-circle, as the Germans call it, especially with reference to the origin of malaria and the course it travels (which will be the direction of the prevailing winds of the locality), and the efficiency of it, which will depend a good deal on the ventilation of the houses and streets, or courts—a good deal on the hygrometric tension of the atmosphere, and a good deal on the sorts of compounds from the decomposition of which it originates. I am inclined to think that the excretions of swine and of human beings give off the worst. I speak now of the source of civic malaria, and not of malaria generally; otherwise the miasms from salt-water marshes are perhaps worse than these. The next in virulence are putrid water-butts and cisterns of water-closets, and emanations from water-closets themselves. Then the emanations from sewers, especially if connected with burial-grounds or slaughter-houses. Indeed, these latter belong to the first rank. Heaps of cow-dung or horse-dung are less injurious than the preceding, and chandleries follow after these. Sometimes cellars get flooded after heavy rains, and in summer send up a foul damp miasm, and this is bad. You must remember that the general tendency of these miasms is to ascend. When the wind blows up or down the river with force, I suspect it blows the miasm up the mouths of the drains which open into it; there is a back air, as well as a back water, and this escapes through the gully-holes in the course of the sewer.

The topography of York is easily understood. The city is situate, for the most part, in a shallow basin, at the termination nearly of the "vale of York." The sides of the basin, north-east and south-west, are gravel, and gravel and clay; a healthy stratum for building purposes, because it is dry, and has also a good declivity to the main stream of drainage. On the south-west side, the city has crept up the side of the basin and overtopped it, descended a slight hollow, and crept up the next gravel-heap, and is overtopping that; and if good communications were opened out with the central parts of the city from this part, it would soon be covered with houses. On the other side you find the Retreat on the crest of the gravel ridge, and very pleasantly situate it is; and buildings are gradually spreading on that side too.

But the course of the two rivers—the Foss and the Ouse—is of the greater importance to us, especially of the Foss, for it is on a level seven feet higher than that of the Ouse. All along the Foss, then, is the locality in which you may most expect to find malarious disorders and fatal aggravation of all epidemical diseases. The Ouse, in its course through the city, principally floods the wharf and streets close to its south-west bank. I believe it rose 17 feet above its summer level once last autumn, and the steamers from Hull and Selby passed over fields and hedges and ditches. But the extent of the malarious mischief in the city is limited to the immediate neighbourhood of the river, as the ground rises rapidly on that side.

You will find statistical tabulations in my report on the sanitory condition of York which show that the course of all epidemics in York has been the same, and that they are less prevalent in proportion to the higher altitude of the localities. There is a double reason for this: first, the greater amount of malaria; and secondly, the condition of the residents and their homes. A poor population is crowded into ill-ventilated houses near the rivers, just as it is in most large towns situate on rivers, and I really believe York with all its faults is much better than any of its neighbours: the mortality is about 1 in 32. If these low-lying parts of the city were improved, it would be quite as healthy as the surrounding rural districts; perhaps more healthy. As they are, they constitute centres of disease: in 1832 the cholera spread through these quarters bordering the rivers; and what is curious, a dreadful pestilence, which devastated York in 1604, commenced within 300 yards of the spot where this epidemic cholera broke out. In my report on the Epidemics of York you will find some historical notices of this plague, and of the sweating sickness, —a skin cholera which was very bad in York in 1551, the fourth year of the reign of Edward the Sixth. The infected houses were marked with a red cross, and their inmates had to carry a white wand in their hands when they went abroad, to "the intent they may be knowen," as the order extracted from the city archives runs. You should read and study the history of the middle age epidemics: well might the people write on their doors in their helpless ignorance, "Lord have mercy upon us!" bleating like sheep going to slaughter, for they had no one to teach them that "cleanliness is next to godliness." But while the clergy of all sects preach the one, the medical profession should, and I trust will, preach the other, until at last we may no longer have to lead the forlorn hope when epidemics prevail, and no longer expose our lives for the preservation of an ignorant and careless public.

Original Communications.

ON THE

TREATMENT OF VARICOSE VEINS.

By F. C. Skey, Esq. F.R.S.

Assistant-Surgeon to St. Bartholomew's Hospital.

Having availed myself of the experience of many authors and other authorities, who have suggested with more or less success, various plans of treatment for the cure of varicose veins, I wish to report that which for many years past has been most successful in my hands, and no doubt would become equally so in others. I may observe in passing, that so far as my own observation goes, no other plan can be relied on as permanent, and entire in its effects; for however absolute may be the destruction of the vein or veins, subjected to ligature, pressure, or division, whichever be the mode adopted, the treatment, where the disease is extensive over the limb, is too limited entirely to remove it. Other veins enlarge, the disease returns, and at the expiration of one or more years the amount of benefit obtained is found incommensurate with the confinement and suffering, entailed by the operation. Moreover, past experience points to occasional results of the most serious kind, among which death itself has had its portion.

The treatment my past experience fully justifies my recommending for adoption consists in the entire obliteration of the trunks and many of the branches of the saphena veins, both major and minor, by very small caustic issues, applied on the projecting veins, however large or numerous they may be; and in suggesting which, I believe I can pledge myself to two conditions: first, that the function of the vein on which the issue is made is from that hour suspended; and second, that the operation of the issue so applied is unattended with danger of any kind. The operation appears to be complete, and immediate. The current of blood is arrested; nor is the obstruction to the circulation thus caused, apparent in any symptom of congestion resulting from it.

It may be inferred from this circumstance, that the blood returned to the femoral vein through these cutaneous channels is, in reality, much smaller in quantity than the size of these vessels would lead us to infer. It will, however, be recollected, that in proportion to the enlarged size of the veins, and their contorted form, is the quantity of coagulum contained within them, by which the circulation is necessarily obstructed, and they present the reality of venous aneurisms; *i. e.* of dilated veins, partially filled with coagulated blood. The proportion of coagulum doubtless varies a good deal, for we occasionally observe its almost entire absence, the veins retaining the softness on compression, due to the fluidity of their contents. However large and projecting the vein, be its contents fluid or solid, on the part most projecting, an issue may be made, so far as I have seen, without the remotest degree of danger, or any other evil consequence.

The material I employ for this purpose is the Vienna paste, a compound of quick lime and caustic potash, in the proportion of five of the former to four of the latter. These ingredients are mixed into a paste with spirits of wine; and in these proportions, which I cannot pronounce to be strictly those of the "Pâte de Vienne," a caustic may be applied, which will readily destroy the surface without causing the excessive pain attending the application of the pure potash alone, nitric acid, or other similar agents. Under some circumstances it may be desirable to diminish the proportion of the caustic. The limb should be examined in the upright position of the body; the projecting veins marked with ink to the number requisite, including all the most salient points, in the trunk and branches.

While in the horizontal posture the places thus marked should be insulated with a circle of plaster of three or four thicknesses, the diameter of which will vary with that of the swelling beneath, but it is very desirable on all accounts to make it as small as possible. I have found one quarter to one-third of an inch to suffice in the plaster, and the issue itself will not exceed the size of a fourpenny-piece, or less.

The caustic may be removed at the

expiration of half an hour, and the leg dressed and rolled lightly. In the course of a week or ten days the eschars come away, and the wounds are healed by ordinary means. But inasmuch as they are not altogether ordinary wounds I wish to say one word on their management.

Two circumstances should be kept in view militating against their early cicatrization, and sometimes so positively, as to protract the recovery for many weeks, and form a serious objection to the treatment.

First, the existence of a sore on the leg or foot at a remote distance from the centre of the circulation, which is under all circumstances tedious and protracted in its progress; and secondly, the disease itself infers a languor of circulation unfavourable to early healing.

In truth, the ulcers occasionally spin out their existence, especially when large, to a very inconvenient duration. I have seen examples, in which one or more of them have defied the curative means employed for three or four months; until, indeed, the patience of the subject of them has been almost exhausted.

It should be kept in mind that varicose veins owe their existence to inactivity of the action of the heart, or, at least, to some cause tantamount to it; and to this inactivity or want of force, and not to anything specific in the nature of the ulcers, is their duration to be referred.

Hence the necessity of restricting the issues to the smallest possible size, compatible with the destruction of the vein; and of such any number may be made. The ordinary number I have employed has been six or seven. I have made twelve on one leg at one time.

The modes of obviating the above evil, and of establishing an active health to the circulation of the limb, are such as are ordinarily employed for this purpose, and by the judicious application of which, the period of healing may be kept nearly within the limits, that control them in other persons.

I often commence the treatment with a course of bark or other tonic agent before the operation, employed for two or three weeks, especially in persons of a feeble constitution. When the eschars come away, the ulcers should not be neglected, but carefully dressed with some form of stimulant. I commonly use the flue of dry lint, or black wash. The removal of the sloughs will be hastened by the application of a roller, applied around the limb from the period of a few days after the operation. I have occasionally made these issues with pure caustic potash, and also with potash once diluted, but the operation is rendered more painful, without any corresponding advantage; and without wishing to attach any marvellous virtues to that form which bears the title of Vienna paste, I think it preferable to any other form I have employed or seen employed.

The slough is complete, and the pain considerable, but not excessive. If too large a quantity of spirit be used, and the paste be too soft, it will of course diffuse its influence beyond the circle of the plaster.

I have had one or two cases, in which considerable pain attended the treatment throughout every stage. The issues were painful in excess, the healing process was unusually painful, and, as occurred in the case of a gentleman now under my care, was protracted to three or four months. That this morbid sensibility is connected with the languid state of his circulation I am inclined to believe, because I have observed, that in proportion to the rapidity of the cure, applying that term to the entire treatment, is there less of suffering; or, at least, more tolerance of pain. These, however, are by no means average cases, but exceptions, and they are neither so frequent nor so marked as to present any serious objection to its application. A man applied to me in the out-patient room of St. Bartholomew's Hospital with varicose veins of the leg, for the cure of which had been made an immense slough, as I imagine, by rubbing on or rubbing *in* the potash stick lengthwise. This slough, which was indeed of noble dimensions, occupied that part of the leg bounded by the knee above, the calf and the tibia below. It was somewhat larger than the palm of my hand!

This man, who was absent without leave from another hospital, thus gave me the agreeable intimation that my small experiment was being tried on a far grander scale elsewhere. The slough was deep, in proportion to the broad expanse of surface. He expressed some wrath at the severity of the treatment. I confess I thought his indignation, with every regard for the junior members of my profession, not altogether groundless. My attention was confined to the management of the large wound, exposed on the removal of the slough, which occupied several weeks, and indeed, in the first instance, to his health, which suffered severely. On the healing process being completed, however, no trace of any veins remained. I have treated with small issues some thirty or forty cases, the large majority of which were persons in the lower ranks of life, and many of whom were out-patients of our hospital, but the treatment has not been confined to this class.

In some few examples the suffering has been remarkably slight, such persons having prosecuted their various occupations from the day of the operation. The average length of confinement required may range from two to three weeks, that of the entire treatment from four to five.

Where the two extremities are diseased I have allowed an interval of one or two weeks to elapse between the dates of the application to each leg, beginning with the worse. In nearly all the above cases, the relief has been of a very positive kind; in the large majority, the cure has been complete; in two or three, the disease at the expiration of about two years has returned in a mitigated form.

Grosvenor Street, July 18th, 1846.

CASES OF
STRANGULATED HERNIA,
WITH SOME REMARKS PRINCIPALLY INTENDED TO SHOW THE NECESSITY OF AN EARLY RESORT TO THE OPERATION.

By John C. Warren, M.D.
Professor of Anatomy and Operative Surgery in Harvard University, Boston.

[Concluded from p. 152.]

Case VI.—*Appearances after death of the parts concerned in a strangulated hernia; no stricture at the mouth of the sac, and no appearance of peritoneal inflammation.*

An Irish seaman, about 30 years old, was brought into the hospital, on the 19th of April, 1844, cold and pulseless. It appeared that he had, for some time back, had a scrotal hernia; that four days since he exhibited marks of indisposition without explaining the nature of his sufferings. On this morning, a medical gentleman, Dr. Adams, was sent for, who ascertained that he had a strangulated hernia, and advised his being brought to the hospital, which was accomplished at 10 o'clock of same day. When he arrived there he was in a dying state, so that nothing could be done for him, and soon after he expired.

On the morning of April 20th, I examined the body. The dead man appeared to have been a stout, healthy person, with a good share of adipose substance about him. The skin was generally of a livid colour. The scrotum exhibited a tumor nearly six inches in length, and about the same in diameter; it had a livid appearance, and in one part was almost gangrenous.

I made an incision beginning three inches above the abdominal ring, and carrying it down to the testicle. The skin was then dissected off for an inch on each side, thus uncovering the fascia superficialis, which was thin. Below this was found a fibrous organization, composed of strong fibres, covering the upper part of the hernial tumor. These fibres were interwoven with cellular texture, so that the whole could be raised from the upper part of the tumor in the form of a membrane. Under this appeared the fasciculi of the cremaster muscle, extending towards the lower part of the tumor, and forming there a continuous thin muscular membrane. This layer was raised for about two inches, leaving the fasciculi entire at the upper part of the hernial tumor, and beneath this appeared a fascia of about the thickness of a sheet of writing paper, which seemed to be the immediate covering of the sac; but on dissecting it delicately it was found to present a number of fibrous layers, the last of which, like a fine gauze, immediately invested the peritoneum. This being opened, a copious discharge of yellow serum took place, and the black intestine presented itself at the aperture. Having resolved to preserve the parts as entire as possible, I did not increase the aperture of the sac beyond two inches, as stated before.

The hernia not being reducible, I proceeded to examine the cause of the impediment, being desirous to know whether there was in this case any support afforded to the doctrine lately put out, that all strangulations are in the mouth of the sac. Examining the superficial fascia over the abdominal ring, I found it excessively tense from the intestinal tumor within it. I then cautiously dissected through this fascia, without producing any material change in the tension of the abdominal ring. The dissection was therefore continued till the teudon of the external oblique muscle was divided, the fibres of the cremaster within being carefully left untouched, so that nothing but the ring and fascia should be cut. Then passing a bougie throug the aperture of the sac and upwards to the stricture, with a little management, it was insinuated through the stricture, after which a bougie of larger size being passed in tne same direction, was without difficulty pushed into the cavity of the abdomen. Then I opened this cavity, by an incision across the umbilicus, and another at right angles with it, and found the abdomen containing a considerable quantity of serum, the small intestine generally black and crowded with fluid, which the friends of the patient had given him with kind intentions no doubt, but which must have greatly distressed him and accelerated his death. On passing the fingers to the inner ring, the mouth of the sac was found to be between one and two inches in diameter, and notwithstanding the swelled intestine and fat mesentery, the finger could be readily introduced by the side of the intestine, showing that no stricture existed at the mouth of the sac.

It has been stated that the small intestine was of a black colour generally. This fact I was at a loss to account for, because there was neither any exudation of lymph, nor other mark of inflammation of the serous membrane of the parietes of the abdomen, nor of the serous investment of the intestine; but presently it was explained, by noticing that the whole mesentery was in a state of tension, from the part of it existing in the hernial tumor. This tension was so great, in consequence of the traction on the vessels, as to interrupt the circulation through all the mesenteric vessels, and produce a congestion of blood in the veins.

A second subjeet of inquiry, the existence of peritoneal inflammation, remained to be examined. The peritoneum, as already stated, no where exhibited any considerable degree of inflammation; it was not discoloured, except from the mucous membrane within it, and at no part exhibited the slightest exudation of lymph, either in the cavity of the abdomen, or in the hernial sac. There was no omentum in the sac, nor in any part of the inferior abdominal region.

Remarks.—It appears, then, that the phenomena of this case give no support to the opinion, that the seat of strangulation is at the mouth of the sac; for the mouth of the sac was quite expanded, and the actual seat of constriction resided in the tendon of the external oblique muscle at the abdominal ring. Secondly, there was no distinct appearance of peritoneal inflammation.

In this case the stricture was removed by dissection from without, for although the sac was previously opened, yet the stricture was not divided from its interior, so that probably this hernia might have been reduced without at all cutting into the hernial sac, and the intestine returned into the cavity of the abdomen. If this operation had been resorted to within twenty-four hours of strangulation, the patient's life would, perhaps, have been saved, and he would have been restored to health in a few days.

CASE VII.—The following case is, perhaps, sufficiently remarkable to allow its introduction in this place, although it is not connected with the principal topics above noticed.

I was requested by Dr. Parker to see a patient of his, who had been attacked with strangulation on the day previous. The hernia was scrotal, on the right side, and of considerable size. I made careful and continued attempts to effect the reduction without success. Other measures have been previously employed: I recommended an operation as soon as the patient could be brought to submit to it. In three or four hours, his consent having been obtained, the parts concerned were shaved, and all other arrangements made for its performance.

The patient was laid on a table, with his legs hanging down as usual: I placed the thumb and fore-finger of the left hand on the skin over each side of the hernia, without making pressure, turned to receive a scalpel from an assistant behind me, and bringing the scalpel down to the surface of the hernia, I perceived there was no longer any tumor: the hernia had at that moment receded, and was perfectly reduced. The patient, to his great satisfaction, was restored to his bed, and had an injection, which operated favourably that night. The next day he took a dose of senna, which cleared his bowels, and in a few days he was quite well.

General Reflections.—The importance of an early resort to a surgical operation in strangulated hernia will, I think, sufficiently appear from the cases recorded above. These have principally occurred within the last six years; they do not include all which have come under my observation during that time; but those not here recorded confirm the same doctrine, since they have been uniformly successful, with the exception of a case admitted to the hospital in October, 1838, and which was not operated on till three days had elapsed from the period of strangulation; for which reason the details of this case have not been given.

The common advice is to employ pressure, and afterwards a certain routine of applications, viz., bleeding, the warm bath, cold to the part, injections of tobacco, with perhaps other remedies, as opium, belladonna, &c., and if these fail, then to operate. In the meanwhile the patient continues in great distress, with an inflammation gradually increasing, and threatening to become unmanageable and fatal. A discussion of the utility of these and other modes of effecting the reduction would extend this paper to too great a length; I will only, therefore, briefly state the results of my experience in regard to them. First, pressure, actively and judiciously employed for a short time, is proper and indispensable; if long continued, either by the hand, bandage, bags of air, water or mercury, it is calculated rather to increase inflammation than to reduce the hernia. Second, bleeding, as above stated, may be carried to a considerable extent under the eye of a judicious and experienced practitioner. Third, the warm bath may be resorted to in mild cases, but in bad strangulations it is useless, and sometimes seems to increase the tension of the abdomen. Fourth, cold to the part may be employed for a short time in the early stage of the affection; when long continued it may produce gangrene, as I have myself experienced. Fifth, the injection of tobacco is an uncertain and dangerous application, wholly inefficacious when the strength of the infusion is weak, and dangerous when it is strong. Sixth, large doses of opium I have known to be useful, giving the patient temporary relief, and afterwards causing muscular relaxation favourable to the reduction of the hernia. Purgative medicines are almost always pernicious. The local application of belladonna, as practised in Germany, appears to me to be a trifling with the life of the patient. It would not be proper, for reasons already hinted at, to consider in this place other modes of treating strangulated hernia; as, for example, the attempt to remove the stricture by dilatation without cutting. This proposal, made by a distinguished English physician, seems to me rather extraordinary: in nearly every case of strangulated hernia which I have seen and known of, there has been barely room to introduce a small instrument, such as a director, or a narrow-bladed knife. The attempt to introduce and employ dilators, of sufficient strength to distend the fibrous apparatus of the abdominal and crural rings, would, I humbly conceive, be nugatory, if not dangerous.

It would seem, from the recent reports of the Parisian hospitals, that the operation is usually too long delayed, being deferred for two or three days. [See the Reports of the Practice in Hôtel-Dieu. *Paris Med. Gaz.*, vol. x.] This matter is the more worthy of discussion, for we look to these hospitals as authority not to be excelled on the subject of surgical operations. From data collected by M. Malgaigne, it appears that the number of cases of strangulated hernia operated upon, in the hospitals of Paris, from January 1st, 1836, to December 31st, 1840, were 220, and of these 133 died. [Vide *Gaz. Méd. de Paris*, tom. x. p. 460.] Also from the surgical records of the Hôtel-Dieu, as given in the same volume of the work already referred to, on page 355, it appears, that the number of cases of strangulated hernia admitted to this hospital during the year 1841, were, of crural hernia 6, of inguinal 3. The deaths of those operated on were 5; one death occurred in a patient not operated on. Allowing, then, that this one case was of too long standing to permit an operation at the time of its admission to the hospital, we still have five deaths in eight operations. The result in our practice, as already stated, has been very different; it being a rare occurrence for us to lose a patient after the operation for strangulated hernia, if called to him in the first period of the attack. Possibly these cases alluded to as received into the Parisian hospitals may have been generally strangulated for some days prior to their admission.

Another remark which may be made in this connection is, that if the operation be long delayed, the parts swell, and thus increase the difficulty of the reduction. In fact, the surgeon should bear in mind, when he employs taxis, the difficulty which may arise, if he is compelled to resort to the operation, from the swelled state of the hernial contents, and their increased sensibility, in consequence of pressure too long continued.[*]

For these reasons, we cannot too strongly recommend an early resort to the operation in cases of bad strangulation; those where the pain, tenderness, and firmness of the tumor are great, and where a constitutional affection distinctly exists. In such, after a scientific and cautious use of pressure, I should advise the following course—that general bleeding be immediately employed, and continued until the patient is made faint. This course will bring on that faintness, which produces the highest degree of relaxation, as well as exert another most important effect in preventing or diminishing inflammation in the affected part. In this state the hernia may usually be reduced, if reducible without an operation. The employment of the warm-bath, of cold to the part, of tobacco, &c., is inferior in efficacy to copious bleeding; they exhaust a precious period of time, and the strength of the patient. But in cases of strangulation not attended with severe pain, or other local and constitutional disturbance, the operation should not be too hastily resorted to.

With regard to the seat of the stricture, the question has been agitated in the French schools, whether strangulation ever exists in the external abdominal ring, and whether it is not always situated in the neck of the hernial sac. In most of the cases of inguinal hernia, which we have had occasion to see, the strangulation was in the external abdominal ring, and the division of this part relieved the stricture, and allowed the hernia to be returned without any interference from the neck of the sac. None of the cases here described go to show that the stricture was in the mouth of the sac. I have, however, operated on cases where the stricture was at the upper ring, and some of these might, no doubt, be cases where the stricture was produced by the neck of the sac; but they are comparatively rare.

Another doctrine has been maintained by high authority, which teaches, that a considerable proportion of cases of supposed strangulated hernia are cases of inflammation of the hernial sac. The history of the instances falling within our experience does not afford any support to this doctrine; and the appearance of the hernial contents in those operated on proves that they were inflamed from interruption to their circulation. In case fourth, for example, the intestine below the stricture was nearly black, but when an additional portion was drawn from the cavity of the abdomen, for the purpose of disengaging it from the stricture, the part thus drawn out was not discoloured. None of the cases reported in this article support this doctrine of peritoneal inflammation, and although such cases may sometimes present themselves, their occurrence is, we believe, exceedingly rare.

The practicability and utility in some

---

[*] The learned editor of the Paris Medical Gazette, May 11th, 1844, objects to the early operation for strangulated hernia, that taxis, when successful, is not followed by any of the bad consequences of herniotomy. Without entering into the discussion of this point, we should reply, that this argument does not appear to us a sufficient objection to early operation, for in every instance of capital disease, the first question the surgeon has to settle, and one paramount to all others, is, how he can most certainly secure his patient's life. Now we think there is satisfactory evidence in favour of the doctrine, that the early operation would save the greater number of lives.

instances of dividing the stricture, without opening the hernial sac, have been established by the experience of various eminent surgeons. We have here mentioned two cases, the first and third, in which this practice was employed with perfect success; in the case of crural hernia in the male, it was attempted, but could not be executed. On the whole, we think that this method of operating should be tried more frequently than it has been heretofore; we may even say that it should be generally attempted. In cases where there was reason to suspect gangrene of the hernial contents, it would be improper; in such it would be proper to open the sac and give the gangrenous part an opportunity of separating. In cases where the stricture was in the neck of the sac, whether at the lower ring or the upper, this operation would be inapplicable, but such cases, we apprehend, are not very frequent.

The last point which remains to be noticed is, the possibility of conducting the treatment, subsequent to the operation, so as to give the patient some security against the return of the rupture after his recovery. This has been fully shown in Case V. In this case the patient wore a bandage for a few days; after the adhesion of the wound, it was discontinued. When he arose from his bed, afterwards, while he walked about the wards, and when he quitted the hospital, he had neither truss nor bandage, nor was there any appearance of the descent of the intestine. The plan to be recommended to gain the desired end is the following. In bringing the wound together after the operation, introduce the needle for making the suture, at the distance of one inch from the edge of the wound on one side, and bring it out at the distance of one inch from the edge on the opposite side. This suture will include two inches of skin; the thread should be tied so as to gather up this skin over the abdominal ring. Two such sutures should be employed, at the distance of little more than an inch from each other. In this way a natural pad will be formed, which will adhere to the aperture of the ring, and which may be sufficient to prevent the subsequent descent of the hernia.

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from page 67.]

Part III.

Of the Opinions hitherto held as to the Essential Nature of Inflammation.

Having thus briefly recapitulated the views which I have been led to entertain as to the healthy actions of the minute blood-vessels, there remains but one additional topic to be noticed before entering upon an examination of the great question selected for the present inquiry. And, however delicate and difficult the task, I must not be deterred by any feelings of timidity or respect for individuals, from concisely stating, and candidly criticising, the prevalent opinions on the subject. In *all* scientific investigations, the love of truth should be held paramount to every other consideration. But in the examination of questions connected with *medical* science, and particularly in the study of an important and extensive disease like inflammation, where the interests of humanity are so evidently and immediately promoted by the advancement of our knowledge, an undue reverence for the opinions of others would indeed be an unpardonable weakness.

It is not my intention, were it in my power, to attempt any lengthened review of the numerous doctrines which have successively been presented to, and for a time adopted by, the profession. Such a display of erudition would in this, as in many other cases, be much more curious than instructive; for, as far as my limited observation has enabled me to judge, the settlement of a difficult and long-agitated question is not in general much facilitated by an extended series of quotations. My remarks will therefore chiefly bear upon those views which, either from their present popularity, or from their resemblance or antagonism to my own, could not very well be passed over in silence.

Were it now necessary to insist upon, not merely the *study*, but the *advancement* of physiology, as an indispensable preliminary to the successful cultivation of pathological science, no stronger argument could be presented than an appeal to the history of the various doctrines which have at different periods been promulgated as to the nature of inflammation. For we find each to have been based upon certain peculiar views of the physiology of the circulation, none of which seem to have possessed sufficient solidity to withstand the attacks of more recent inquirers; and the consequence has been, the gradual downfall of the pathological doctrines which were based upon erroneous or obscure views of the natural actions of the body.

The first author to whom I shall allude is Boerhaave, whose ideas on this subject may, by some, be considered to approximate very closely to those which I have adopted. But a slight examination of his writings will suffice to shew that, beyond the fact of our mutually recognizing a mechanical obstruction as the universal concomitant and cause of inflammation, my views of the essential nature of this disease and of the manner in which it operates in the production of its effects, are very different from those taught by that sagacious and accomplished physician.

Cullen's doctrine, of a spasm of the extreme vessels, which, as an occasional *predisposing* or *exciting* cause of inflammation, must, I think, be to a certain extent adopted, will be more conveniently considered in a subsequent part of this communication.

The celebrated work of John Hunter, which, even to this day, influences the opinions of many eminent writers on inflammation, and which must ever be studied with respect and diligence as embodying the matured views of a most able and experienced man, does not, so far at least as I can judge, throw any direct light on the nature of the disease. His practical precepts are doubtless most excellent, and many of the pathological principles which he deduced from his careful and prolonged observation of disease evince the deepest reflection and the highest powers of generalization. But his views, both of the healthy and diseased actions of the body, are so deeply tinged with the mysticism of the vitalists, that their unlimited adoption would be equivalent to a total prohibition of all further progress in this important department of pathology. I shall only add that, though Hunter is generally considered as adverse to the idea of *obstruction* constituting the essential cause of inflammation, the passage on which this conclusion rests is in itself so ambiguous, and so much at variance with the remarks immediately following it, that the authority of his name may just as fairly be placed on one side of the question as on the other.

The signal failure of Boerhaave's attempt to found a mechanical doctrine of inflammation seems to have deterred modern pathologists from ever directing their thoughts to the possibility of its being, in all its essential characteristics, a purely physical disorder. They have consequently, in alluding to the question of its nature, contented themselves with describing as minutely as possible the changes which are observed to take place in an inflamed part, the production of those changes being of course referred to nervous, or vital, or, in other words, to some unknown agency. It is not, therefore, surprising that the discussions which occupy so prominent a place in the modern history of inflammation should have reference rather to the correctness of some disputed observation, or the adjustment of some incidental and secondary question, than to the establishment of a great principle explanatory of the nature, causation, and consequences of this disorder of the circulation. We accordingly find that the investigations of Thomson, Philip, Hastings, and others, are chiefly directed to the settlement of the dispute as to whether the action of the vessels is inordinately increased or diminished in the inflamed part. It is not always very easy to understand the precise meaning intended to be expressed by the term *action;* but so far as relates to the establishment of the fact of the enlargement of the minute blood-vessels, and the gradual retardation and ultimate stagnation of the blood contained within them, the microscopical observations of these gentlemen are sufficiently conclusive.

Dr. C. J. B. Williams, in some lectures which appeared in the MEDICAL GAZETTE during the year 1841, and the substance of which is incorporated in his recent publication on the Principles of Medicine, has certainly treated this interesting and important subject in a much more rational spirit than, with one exception, any preceding writer. His definition of inflammation is, however, liable to the same objection which I have urged against those of other modern pathologists, viz. that *it merely describes certain phenomena of the disease*, without imparting to the mind of the reader any definite idea of its real nature; for he defines inflammation as "local hyperæmia in a part; the motion of that blood being partly increased and partly diminished." And beyond the fact of its drawing a distinction between the rate of motion of the blood contained in the part actually inflamed, and that circulating in the adjacent capillaries, I must confess my inability to perceive in this definition any more precise information as to the essential nature of the disease than is to be found in that of Celsus.

The writer who has, in my opinion, exhibited the greatest ability in his examination of this subject, is Mr. J. W. Earle. His papers, published in the MEDICAL GAZETTE, during the year 1835, not only evince great sagacity and high powers of reasoning, but also show their author to have been animated by a sincere love of truth. On one or two important points he has suggested views almost identical with those which have been forced upon me by my own reflection and researches. But his adoption of Wedemeyer's idea, that the capillaries are membraneless canals, mere grooves or channels in the parenchyma, without any proper investing coat; his inability to adduce any direct and positive facts in support of his opinion, and his retention of, what I must conceive to be, erroneous and obscure views of the physiology of the circulation, would probably, for an indefinite period, have prevented his explanation from receiving the attention which it merits. If the correctness of the principle which I am about to endeavour to establish should ever be generally admitted, whatever credit may be attached to a partial anticipation of the doctrine is certainly, as far as I know, due to Mr. Earle. And I have the more pleasure in admitting this priority in the conception of the leading idea, inasmuch as that gentleman is personally unknown to me, and our views are, in almost every other particular, diametrically opposite.

Of the laws regulating the effects of obstructed capillary circulation, as deduced from a course of experiments on the kidney.

It has always appeared to me an extraordinary circumstance, that, while every theory of inflammation which has appeared since the discovery of the circulation more or less explicitly recognises the existence of some unnatural obstruction to the blood's passage through the minute vessels of the affected part, no attempts have been made to determine, by actual experiment, the degree of connection between that disorder of the circulation and the chain of pathological phenomena of which it is the invariable concomitant. We do indeed find that so long since as the time of Lower it was known that an obstruction to the flow of blood through the large venous trunks caused the effusion of its more aqueous portion into any free spaces in the parts below. But, with the exception of isolated observations of this nature, nothing seems to have been effected towards the elucidation, by direct experimental evidence, of the morbid changes induced, in a healthy part or organ, by the existence of a local impediment to the circulation.

And before relating the facts which will constitute the chief support of the following views on the nature of inflammation it may not be altogether useless or uninteresting to give here a brief account of the manner in which I became gradually involved in the investigation of this subject.

In the autumn of 1841, being then engaged in studying the nature of granular disease of the kidney, and feeling disposed to consider it as essentially congestive or inflammatory in its origin, it occurred to me that the most ready and satisfactory method of deciding the question would be, to ascertain by experiment how far similar phenomena could be induced by the artificial production of simple nephritis. And "from reflecting on the great obstruction to the circulation through the minute vessels of an inflamed part, I was led to imagine that, by preventing the return of blood from the kidney in one of the lower animals, and taking care not to injure the artery in the experiment, a condition of the organ similar to that present in acute nephritis would be produced."* The result of one or two trials proved this expectation to have been well founded; and, thus encouraged, I proceeded, in the course of the following summer, to extend my observations, and to vary the conditions of the experiment. The facts thus obtained, appearing sufficiently numerous and decisive to justify me in attempting to discard the generally received opinions on the subject, were embodied in a paper on the nature of inflammation; but the publication of these views has, from a variety of causes, been delayed till the present moment. The experiments themselves, and the conclusions to which they directly led, were, however, through the kindness of Dr. Marshall Hall, presented to the Royal Medical and Chirurgical Society, in February 1843 and published in the next volume of that Society's Transactions. And on the whole this delay has not been without some advantage. For the intervening period has not only allowed me to satisfy myself, by deliberate reflection, of the accuracy of my original impressions, but has also enabled me to investigate some important points in the physiology of the circulation, and thus, I trust, given greater clearness and comprehensiveness to my views on the local derangements of that great instrument of animal life.

It will thus be seen that these researches were not, in the first instance, directed to the attainment of any higher object than the settlement of some points connected with the morbid appearances and effects of nephritis. And it was their success in illustrating the mode of production of certain phenomena of this particular affection which encouraged me to extend my observations, in the hope of obtaining results applicable to the elucidation of the general subject of inflammation. Another important inducement to persevere in this extended inquiry arose from the conviction that no other organ in the body presents equal facilities with the kidney for an experimental investigation of this nature. In any of the lower animals, this gland, particularly that of the left side, can be readily reached and exposed by an incision in the loins, passing between the lumbar and abdominal muscles. And, as its connections with the surrounding structures are very slight, it can, if required, be drawn out through the wound, its vessels and duct isolated, and, if necessary, secured by ligature; and the organ then returned without the infliction of any material injury to it or any other vital structure. Then its blood-vessels are so arranged that, while both vein and artery are equally accessible, the whole of the blood passing into, and returning from, the gland, must traverse these trunks, and consequently, by acting on one or other of them, we have the circulation through the organ completely under command. And availing myself, to the fullest extent, of the advantages thus offered, I have not only studied the effects of obstructed circulation as induced by a partial or complete occlusion of the renal vein, but have also, in an organ healthy and untouched, caused phenomena identical with those of acute inflammation by obstructing the abdominal aorta *below* the origin of the renal arteries, and at the same time tying the vessels of the left kidney; the consequence of which necessarily was a greatly increased flow of blood to the remaining organ. An enumeration of the advantages afforded by the kidney for the prosecution of this inquiry would be very incomplete without some notice of the beautiful contrivance by means of which aqueous effusion naturally takes place into the uriniferous ducts; for an account of which we are indebted to my esteemed friend Mr. Bowman, of King's College. The piece of minute mechanism thus unexpectedly brought to light is in itself so exquisitely simple, and at the same time so admirably adapted to the accomplishment of the end it was intended to fulfil, that its discovery could not fail to elicit from every lover of natural science the warmest admiration.

---

* An Inquiry into the Nature of Granular Disease of the Kidney, 1842, p. 30. This little brochure will be found to contain, in a conjectural form, most of the physiological and pathological principles embodied in this communication. There is, however, an important error in it which I am anxious to correct. It arose from my confusion of the lobules visible on the surface of the kidney with the proper Malpighian bodies, since described by Mr. Bowman. But as my reasoning was evidently intended to apply to the former, it becomes rather a verbal error than one of fact.

But to myself this valuable addition to microscopical anatomy is fraught with a double interest. For it not only enables me to explain, and trace, the manner in which my experiments were productive of certain effects, but as a peculiar anatomical arrangement evidently connected with, and provided for an important physiological purpose, it also constitutes a powerful argument in favour of the general hydraulic principles, which I have supposed to regulate many of the chief uses of the circulation. In the tuft of tortuous capillaries thus protruded into the extremity of each excretory tube, we have but an exaggeration, for a special object, of the general contrivance by which the lateral pressure of the blood contained in the terminating arterial ramifications is maintained at a point sufficient for the occurrence of effusion. It must be observed, that, in the healthy state, the lateral pressure induced by the impediments to the blood's passage through the convuluted vessels merely causes the constant exudation of its more aqueous portion into the surrounding tube. And by reflecting on this arrangement of the blood-vessels, and the natural absence of albuminous matters in the urine, the reader will find no difficulty in understanding the facts and reasoning which tend to demonstrate the connection between an increase in the lateral pressure of the blood contained in those vessels, and an effusion into the urinary passages of its various albuminous constituents in a ratio corresponding to that increased pressure.

[To be continued.]

LOTION FOR DISEASES OF THE SKIN.

In cases of pityriasis herpes and eczema, M. Cazenave has recommended the use of a lotion composed of one part of alum and sixty-two parts of water. In chronic eczema he recommends as a useful local application nitric acid and muriatic acid, of each twenty-five drops, to ten ounces of water.

MEDICAL GAZETTE.

FRIDAY, AUG. 7, 1846.

In our last number we announced that a report had been circulated to the effect that the Asiatic cholera had reappeared in London. We then stated that the report was unfounded, and that it had probably arisen from the prevalence of diarrhœa and common English cholera in an unusually fatal form. Since these remarks were made, the subject has been discussed in the House of Lords, and great publicity has been given to the report by the daily journals, without, as it appears to us, placing the facts in their true light. Indeed, while the rumour is contradicted, enough is said to excite great fears in the public mind. For this reason we consider it necessary to return to the subject.

On the 1st inst. the following ministerial announcement was made by the Marquis of Lansdowne in the House of Lords, in answer to a question regarding the reported appearance of the Asiatic cholera in the metropolis.

A few days ago, an opinion seemed very generally to prevail in this city, that Asiatic cholera had broken out in London, and that it had appeared in a variety of cases. Immediately upon an intimation to that effect having been brought to the Council Office, some medical authorities were consulted; and, in a few hours after, a medical gentleman of great experience, conversant, too, with the practice in the different hospitals of this city, was sent into all the localities in which it had been asserted cholera had broken out. He visited all the houses in those localities, made every inquiry from which he might derive certain information, and on the following day he reported to me that he had not met with a single instance of disease which indicated the presence of Asiatic cholera. Not content with this, he visited also the hospitals in the immediate

urhood of those localities, and
ot find in any of those hospitals
f the disease in question. He
r did find instances of that
which usually appears in large
this season of the year; it has
nilarity to the Asiatic cholera;
ssesses none of the aggravated
rs of that dreadful plague. Your
s may rely, I think, upon this
nt being correct. I have de-
st both the gentlemen to whom
referred, and another medical
connected with the Council
hould be on the look-out from
lay, in order that we might be
quainted with the truth; and,
his day, I am glad to say no
tion that Asiatic cholera has
d, has been received. I have
ther to state I have had a con-
1 with a noble friend of mine
ther house of Parliament, and
s intended to renew his motion,
parishes take certain precau-
such as whitewashing their
and rooms, usual in epi-
nd contagious diseases, should
rtunate necessity arise, without
recourse to any specific appli-
o Government or Parliament.
that Parliament will see the
y of acceding to a motion so
tionable as this.

nost heartily concur in the pro-
of Government adopting all
recautions. Whether we are to
ited by this dreadful pestilence
the removal of masses of putre-
lth from our streets, the cleans-
lrains, and the ventilation and
g of the dwellings of the poor,
ndoubtedly to be at once under-
nder the direction of a Board of
A vigorous and timely adop-
hese hygienic rules, would tend
ate the severity of the pesti-
hould it come among us; and
ng that it should not make its
nce, we shall still be employing
eans which are best calculated
enting the diffusion of other
c and contagious disorders.
tated last week, that two dis-
iarrhœa and cholera, were un-
prevalent in the metropolis.

The following table of deaths from these diseases will show that they are much more prevalent and fatal at the present time, than they were at the corresponding period last year.

1845.

Week ending	Cholera.	Diarrhœa.
July 12 . .	2	25
" 19 . .	2	25
" 26 . .	2	44
	6	94

1846.

Week ending	Cholera.	Diarrhœa.
July 11 . .	8	87
" 18 . .	20	124
" 25 . .	26	156
	54	367

It is, however, not only necessary to note the number of deaths, but also to consider the *ages* at which the fatal attacks takes place. According to an excellent authority (Dr. Copland), in the Asiatic cholera, the number of cases which occurred *before puberty* was very small, and from that age to thirty the proportion of recoveries was greatest. From 40 to 50 the proportion of deaths increased remarkably, and after 50 years of age, but few recovered. Of the six deaths from cholera in the three weeks of July 1845, 4 were under the age of 15, and 2 occurred between 15 and 30. Of the 54 deaths in the corresponding weeks of July 1846, 18 were under 15, 16 between 15 and 60, and 20 above 60. Of the 94 cases of diarrhœa in the three weeks of 1845, no less than 80 were under 15; 5 were between 15 and 60, and 9 above 60. Of the 367 cases of diarrhœa in the three corresponding weeks of 1846, 314 were under 15, 15 between 15 and 60, and 38 above 60: or as a summary,

	Cholera.		Diarrhœa.	
	Infants.	Adults.	Infants.	Adults.
In 3 weeks of				
July 1845 .	4	2	80	14
Ditto 1846 .	18	36	314	53

These tables will make it apparent that cholera and diarrhœa are much more fatal in 1846 than they were in 1845; the relative number of deaths from *cholera* in the two periods selected being as 54 : 6 or 9 : 1. The deaths of infants to adults in the two periods were as 22 : 38. The comparative deaths from diarrhœa in the two periods were as 367 : 94, or not quite 4 : 1; and of infants to adults (from the same cause) the large proportion of 394 : 67, or nearly 6 : 1. These facts tend to show that the most prevalent disease of the present season is diarrhœa, and that this is chiefly confined to the infantile class; *i. e.* to that class of the population which was observed to be in general exempt from attacks of the Asiatic cholera. The increase in the deaths from these causes appears to us to be sufficiently accounted for by the very high temperature which has prevailed during the summer, combined with the effects of this temperature on decomposing animal and vegetable matter. The meteorological registers show that the temperature of the summer of 1846 has been nearly as much above the average, as that of 1845 was below it.

We have entered into this analysis in the hope that it might be the means of allaying any apprehensions which may have been excited by the current rumours respecting the presence of Asiatic cholera in London. It will be seen that the increase of mortality in the metropolis is sufficiently explained by the prevalence of an entirely different disease; and that this disease is attacking a class of the population which in 1832 was observed to be remarkably exempt from the attacks of Asiatic cholera.

Although it is quite proper that every precaution should be taken to preserve the health of the community, we think a most unnecessary degree of alarm has been excited on this subject. The mere name of the disease, Asiatic cholera, is sufficient to strike terror. So far as the official registers can be trusted there is not at present any reason to suspect that the slight increase in the rate of mortality above the *annual* average is due to any other cause than one of those occasional aggravations of a particular disorder depending on the variable influence of seasons. In a contemporary journal* it is stated, that during the week ending July 25th, there was an increase of 105 deaths, or rather more than 11 per cent. "Of that excess just one half, 52, were cases of death from cholera—not Asiatic, but of the sporadic kind—and from diarrhœa attacking adults." It would have been advisable not to have mixed up the deaths from cholera with those from an entirely different disease, diarrhœa, as this method of enumerating deaths is calculated to give rise to erroneous apprehensions. But the number, 52, appears to us to have been altogether taken wrongly. It is made out by adding all the deaths from cholera (infantile and adult) to those deaths from diarrhœa which have taken place among *adults* only. Either the infantile cases of sporadic cholera should have been excluded, or the infantile cases of diarrhœa should have been added.

Now the fair way of estimating the increased mortality from a particular disease in reference to the alleged outbreak of Asiatic cholera, appears to us to be by taking a certain period—we have here taken the last three weeks, and confining our calculations to the deaths of those who have passed the infantile age. During this period, in a population of nearly two millions, and in a season remarkable for the intensity of the heat, there have been 36 deaths from sporadic cholera, or 12 per week; and 53 deaths from diarrhœa, or 17 per week! This is surely sufficient to show that the health of the metropolis is not in that alarming condition which it has been represented to be. As to infants, the mortality is at all seasons higher among them than among adults. Other zymotic diseases, such as hooping-cough and measles, are now far less fatal than they were in the spring. But because diarrhœa is common to infants and adults, it does not appear to us strictly fair to allow it to influence our calculations respecting another disease, the attacks of which are chiefly confined to those who have passed the infantile age. The diarrhœa of infants, replaces, at the present time, other zymotic diseases, such as small-pox, measles, and scarlatina. It must not be regarded in the light of a superadded cause of mortality; and although it appears to swell the number of those who perish weekly from a particular malady, it must be remembered that other causes of death among infants have nearly in an equal degree abated.

---

* Times, Aug. 1st.

The following notes respecting the claimants to the discovery of the circulation are from a letter addressed by Mr. James Young to Dr. Willoughby, in 1695.

"I never heard Columbus named amongst the pretenders to the discovery of the circulation; but Cæsalpinus [and] Paulo, of Venice (the author of the 'History of the Council of Trent,' not Paulo Venetus the traveller), are all the moderns named that I ever heard of. I need not tell you how many disputed the truth of the experiment itself, and what was written against it by Æmilius Parisanus, Riolan, Primrose, and some others, which Harvey answered himself (vide *Exercitat. Anat.* Edit. Lugd. Bat. 1639); but he never positively affirmed that he was the first discoverer, after all that Walleas, Riolan, Spigelius, had said on the point, but that he had his hints from And. Cæsalpinus, and that P. Paulo (who was at Padua with Harvey, and thought to be him who first discovered the valves in the veins to Fabricius ab Aquapendente) [had told him] seems very likely, though the perfecting and explaining the thing were undoubtedly his, as a learned physician of his age does acknowledge, though, at the same time, he strives to diminish the glory of Dr. Harvey."—*Provincial Medical and Surgical Journal.*

Reviews.

The Liverpool Health of Towns Advocate, under the Sanction of the Committee of the Health of Towns Association, from September 1845 *to July* 1846. Nos. I. to XI.

This is an admirable collection of Essays, published monthly under the superintendence of Dr. Sutherland—a physician who has directed much attention to those removable causes of disease which are annually leading to a great waste of life in town populations. Six of the parts before us are occupied with a popular description of the sanitary condition of Liverpool, of the physical causes of mortality and disease as they affect that town, on the supply of water, sewerage, cleansing, and paving, and subjects of the like nature. It is not, perhaps, generally known that Liverpool has had the bad pre-eminence of retrograding in its sanitary condition. As Dr. Sutherland remarks in his address, it is the most unhealthy town, not only in Lancashire, but in the kingdom. Its annual rate of mortality, when the last average was taken, was 1 in 28; while in London, with a population *six* times as large, it was 1 in 37: hence the mortality of a town population does not always increase in a direct ratio to the number of the inhabitants. Indeed, it would appear, from accurate statistical observations, that 1800 people die annually in Liverpool over and above the number that would die if the town were as healthy as London!

The average age at death, which reaches 26 years in London, and 20 in Manchester, is in Liverpool only 17 years, a striking indication of the large amount of mortality among the young! While the deaths under 5 years are 32 per cent. in London, they are no less than 49 per cent. in Liverpool, or about one-half. On the other hand, double the number arrive at the age of 70 in London that do so in Liverpool; and yet it is very well known that metropolitan statisticians are exceedingly discontented with the condition of London, which is thus proved to be positively healthy when compared with Liverpool. One of the main causes of this great mortality in Liverpool is undoubtedly an overcrowded population, with all its concomitant evils of imperfect ventilation, drainage, and sewerage.

It would carry us too far to enter into an analysis of the contents of these pamphlets at the present time. The essays have not merely a local but a general interest: they are exceedingly well written, the facts are not overstated, the language is clear, and the reasoning sound. Philanthropic labours of this kind, which emanate almost exclusively from members of the medical profession, deserve universal support and encouragement. They are calculated to remove much error and prejudice arising from ignorance and indisposition to change among the lower classes. We anticipate that the object of the author, of opening the eyes of the inhabitants of Liverpool to their dangerous position, and the necessity for town improvements, will be fully realized. These improvements should consist, not in building hospitals to receive patients, but in averting all the common causes of disease.

A Statistical Report of the Surgical In-Patients of the Royal Berkshire Hospital, from its establishment, May 1839, *to May* 1845. By GEORGE MAY, Surgeon to the Hospital. 1846.

THIS is a reprint of an excellent statistical paper published in the last volume of the Provincial Medical and Surgical Transactions. It is upon the accumulation of facts of this kind that all sound experience in reference to medical or surgical practice must be finally based. The remarks in the paper are few and practical. The tables, of which there is a large collection, are allowed to speak for themselves; and the results are such as to reflect credit upon the founders of the Royal Berkshire Hospital, as well as on the Surgical Staff of that Institution. It appears that in the first six years 1291 cases requiring surgical treatment were admitted, and that the total deaths, including those from operations, were only 53, or but little more than 4 per cent. This rate of mortality is so low as to contrast most favourably with that of the large hospitals of England and the continent. In the tables of the different diseases and accidents requiring operation, Mr. May has not omitted any fact calculated to throw light upon the results of treatment. Age, occupation, date of admission, anterior duration, date of operation, result and duration of treatment, are successively given: hence figures are made to have here their true value—a somewhat rare occurrence in *medical* statistics.

Among the preliminary remarks, we find the following observation in reference to strangulated hernia: it deserves to be well impressed upon the minds of those who are commencing the practice of their profession:—

> "Reduction of strangulated hernia has been effected by a great variety of means, and this has induced the employment of many in succession, with the hope of averting operative interference. Without enumerating them, or attempting a comparative estimate of their value, it is believed that the greatest ratio of success will follow their almost entire abandonment. The patient may be brought to the side of the bed, the stricture divided, and the whole completed in little more time than is required for ordinary venesection."

Many lives have been lost from a neglect of this rule.

If the surgeons of other hospitals, provincial and metropolitan, would devote a portion of their time to the tabulation of the results of their practice on the principles adopted by Mr. May, we need hardly say that not only would the profession derive benefit from their labours, but the impropriety and danger of following particular modes of treatment in certain cases would be effectually exposed. Carefully drawn statistics would soon show what was to be understood by a *successful* operation.

Lectures on the Urine, and on the Pathology, Diagnosis, and Treatment of Urinary Diseases. By JOHN ALDRIDGE, M.D. &c. &c. 8vo. pp. 80. Machen. Dublin: 1846.

FOR many centuries previous to the time at which medicine ceased to be in the condition of a mere empirical art, an observation of the general physical characters of the urine formed one of the most important means of diagnosis and guides to treatment which physicians possessed; and rude and cursory as their means of examination certainly were, there can be little doubt that men of observation and experience gained, from the cautious examination of the appearances presented by this secretion in every case that came before their notice, many interesting and important data which greatly aided them in their practice; and the re-discovery of which, by surer means of observation, has cost the observers of our own time a vast amount of clinical study and chemical research. In fact, the writings of many old authorities, especially those of the physicians of the sixteenth century, prove very clearly that an examination of the visible characters of the urine enabled them to distinguish the existence of various states of the system the discovery of which has been entirely attributed to the chemical experiments of the present day. It was, however, fortunate that a time arrived when this cursory mode of examining the urine fell wholly into disrepute, continuing only to be employed occasionally by some empiric who affected an antique style of practice: it then became the custom to trace disease somewhat more carefully to particular organs; and, while the morbid conditions of the several viscera were noticed with some exactness, the state of the secretions was not altogether overlooked; but it is a remarkable fact, that even up to a very recent period physicians had not learned to connect particular abnormal conditions of the secretions with special lesions of the secernent organs. A singular illustration of this fact is afforded in the history of the disease now known as morbus Brightii. From a very early period physicians were perfectly well aware that some forms of dropsy depended upon organic disease of the abdominal viscera, and many old authorities allude to the fact, that they had observed a "scirrhous" condition, (which was evidently granular degeneration of the kidneys,) in fatal cases of ascites and anasarca, especially in those persons who had led intemperate lives. The fact, also, that in many cases of dropsy "the urine coagulates like diluted serum of the blood,"[*] was noticed by many observers—among others by Cotunnius, Fordyce, Darwin, and Cruikshank; but it is remarkable that those authorities did not appear to connect this state of the urine with any particular lesion of the kidneys; indeed, Cruikshank especially insists upon the idea that coagulability of the urine is entirely confined to cases of general dropsy, "whilst *in that which proceeds from unsound viscera* it is usually high coloured and scanty, deposits, on cooling, a pink coloured sediment, and *does not coagulate either by heat or the nitrous acid*[*]." Here a great discovery was lost from want of due caution in distinguishing between cases in which the kidneys were principally diseased, and those in which the liver was mainly affected. Dr. Blackall took a step greatly in advance of this, when he stated, in respect to the coagulability of the urine by heat, that "it very generally, although not uniformly, attends what may be called original dropsy, and *frequently* is *superadded to great visceral unsoundness*[†]." It still remained for Dr. Bright to define the precise class of cases of dropsies in which a coagulable state of the urine is present, and to demonstrate the connection of this state with certain definite lesions of the renal apparatus. The recent observations that have been made respecting the mode in which the urine is naturally eliminated, and with regard to the true condition of the secreting portion of the kidney in cases of morbus Brightii, now appear to have rendered this interesting and most important discovery fully complete. The history of this discovery is alone sufficient to prove to the learner how absolutely indispensable it is, for the just appreciation of local and constitutional disease, not only to be perfectly acquainted with the usual modes of examining the secretions with minuteness and accuracy, but of connecting errors of secretion with special lesions of particular organs.

Recently, vast additions have been made to our knowledge of urinary analysis by a host of careful and ingenious observers, among whom Prout, Bird, Rees, and Simon, hold a foremost rank; and we do not hesitate to affirm that the interesting pamphlet of Dr. Aldridge, although far less elaborate than many of its predecessors, is, on account of its clearness, accuracy, and brevity, one of the most useful works that could be presented to the student who is about to enter upon an investigation of urinary diseases.

---

[*] Cruikshank.

[*] As quoted in Edinburgh Med. and Surg. Journal, vol. ix. p. 335, 1813.

[†] Observations on the Nature and Treatment of Dropsies, by John Blackall, M.D. p. 193, 1813.

The following are the principal subjects discussed in these lectures: the composition and physical properties of the urine; its chemical composition in man and in the inferior animals; putrefactive fermentation of the urine; its qualitative and quantitative examination; the pathology, diagnosis, and treatment of urinary diseases. The great objects of the author appear to have been to condense the information contained in his lectures, and to render it in the highest degree plain and demonstrative, to state merely those means of examination which are at once the simplest and most sure, and to define as accurately as possible the connection between each abnormal condition of the urinary secretion, with certain definite alterations in the kidneys, or their appendages. It certainly strikes us that the precise nature of these connections has, in many instances, been stated with too great a degree of confidence by the author; but if any error has been committed in this respect, it may be easily remedied by further observation, and the usefulness of the plan which he has defined will still remain uninvalidated. As we feel anxious that our readers should become well acquainted with Dr. Aldridge's little work by a perusal of the original, we shall not enter more fully into a discussion of the author's general views, but conclude our notice with a few quotations of interesting passages.

The true nature of the substance termed by Berzelius "extractive matter," which that observer found to constitute upwards of one-fourth of the solid constituents of the urine, has never been positively decided by chemists, and still presents an interesting field for investigation. Dr. Aldridge observes, that

> "Berzelius extracted from it a small quantity of saponaceous fat; and Liebig has separated a little hippuric acid; it is known to contain the peculiar colouring matters of the urine. The following are the properties of this extractive matter, separated as completely as possible from the defined constituents of the urine. It is soluble to a certain extent in absolute alcohol; more *soluble in rectified* spirits; (sp. gr. 0·840), and entirely soluble in water: ether has no action on it. Its solution in water putrefies very rapidly, generating a considerable quantity of acetic acid, and during its putrefaction it gives off a peculiarly disgusting odour; not identical, however, with that of putrid urine: if the putrefaction is permitted to take place in a colourless glass phial, the latter will become blackened. A little of the dry extract folded in silver-foil, and heated in the flame of a spirit lamp for a few seconds, then unfolded, and moistened with a little water, stains the surface of the silver a dark-brown. Some of the extract being heated in a glass tube, open at one extremity, and over the open end of the tube a rod moistened with strong muriatic acid being held, white fumes are produced, and a light charcoal remains. The watery solution produces precipitates with acetate of lead, sub-acetate of lead, proto-chloride of tin, and nitrate of silver; it is slightly troubled by corrosive sublimate and tincture of galls.
>
> "These properties point out that this substance contains oxygen, hydrogen, nitrogen, carbon, and sulphur. It is, moreover, evidently a mixture of very different compounds. The portion soluble in alcohol is capable of being completely decolorised by digestion with animal charcoal. When obtained in the most concentrated form it is capable of without being charred, it is still viscid and tenacious. When heated in a tube it gives off a pyrogynous oil, water, carbonate of ammonia, and leaves a porous charcoal. It is probably a mixture of various compounds, but the attempts to separate them have not as yet been successful. Its most remarkable property is that by the putrefaction of its watery solution *much acetic acid becomes generated.* The portion insoluble in alcohol is precipitable in white flocks from a concentrated watery solution, by the addition of anhydrous alcohol. In this respect it resembles vegetable mucilage and pepsine, and, like the latter, it gives off ammonia when heated. The circumstance which principally struck me in its examination is, that *it has not any tendency to form acetic acid by putrefaction.*"—(pp. 10, 11.)

The following are some useful particulars respecting certain difficulties which may occur in the qualitative examination of the urine.

> "Suppose there was presented to you a specimen of urine to examine, which was high-coloured, neutral, with a whitish amorphous deposit; that upon the addition of nitric acid and agitation this deposit did not seem to dissolve; and that upon the application of heat, no apparent change took place. The urine in this case would be al-

buminous with a deposit of earthy phosphates. The urine did not coagulate by heat on account of its alkalinity; for neutral or alkaline urine will not coagulate by heat, although albuminous; and the coagulation of the urine by nitric acid would disguise the solution of the phosphates by the same reagent. In this instance acetic acid would dissolve the phosphates without coagulating the albumen; and nitric acid and heat would afterwards detect the presence of the latter.

"Again: suppose a specimen of urine, high-coloured, acid, and depositing a copious powdery sediment, which disappears upon the application of a gentle heat, but upon raising the temperature to ebullition, a copious, white, and flocculent precipitate is thrown down. The urine in this case would be a highly concentrated specimen, containing a more than ordinary proportion of the earthy phosphates; and Schaffner has shown that solutions of the phosphates of magnesia and lime are decomposed at a boiling temperature, sub-phosphates being precipitated. That the phosphates of the urine are frequently precipitated by ebullition was first pointed out by Dr. Rees, and it is now a phenomenon sufficiently familar. In this case the addition of a little nitric acid, causing the re-solution of the precipitate, would point out its difference from albumen.

"Let us suppose another specimen of urine—high-coloured, transparent even in the cold, and alkaline, which would remain unchanged by the application of heat, but which would instantly precipitate upon the addition of acetic acid. Such a specimen would consist of a highly-concentrated urine, in which the urates were kept dissolved by an excess of alkali, but upon the latter being saturated by an acid, they would instantly precipitate. That the sediment produced under such circumstances was composed of urates, could be easily proved by their disappearing upon the application of heat."—(pp. 36-7.)

The following facts with regard to a peculiar form of hæmaturia may be new to some of our readers. He remarks:—

"When neither accidental to injuries or diseases of the urinary passages, nor vicarious, the hæmorrhage always proceeds from the kidneys. In this case it may be constitutional, as in purpura and scurvy, or endemic, as in certain tropical countries, such as the Mauritius and Brazil, when it commonly continues until puberty; and sometimes even then only changes its form, persisting as an invisible variety, although its presence may no longer be *proclaimed by the colour of the red particles* * * * So, as Mr. Rayer has shown, hæmaturia may consist in the escape of all the elements of the blood, or of the liquor sanguinis, or simply of the defibrinated serum. And this is not peculiar to hæmaturia; for you may also have a serous epistaxis or hæmoptysis; and I have met with instances of pulmonary solidification, in which, instead of the usual syenitic appearance, the fibrine solely was poured into the air cells, constituting what might be called white hepatization."—(p. 59.)

Technik der Medicinischen Diagnostik. Von DR. A SIEBERT. Erster Band, 3 Lief. Zweiter Band, 1 Lief. Erlangen, 1843—5. Encke.

The Art of Diagnosis in Medicine. By DR. A. SIEBERT. Vol. I. and Part I. of Vol. 2d. Erlangen: 1843—5. 8vo. pp. 408, 128.

THE field of medical literature is so fully occupied by manuals, treatises, and cyclopedias, that any one who feels the *sacra fames* of authorship burning within him, must, we should imagine, be embarrassed to select any subject which had not already been well explored by a host of literary adventurers. Dr. Siebert, however, appears to have fallen on a subject which in name, if not in substance, carries with it an air of novelty. Medical Diagnosis, comprising that branch of medical science which relates to the detection of internal diseases and the principles whereby they may be distinguished from one another, is essentially the basis of practical medicine. The author cannot be accused of any want of zeal or industry in the collection of materials:—those parts of his work already before us cover more than five hundred large octavo pages in close-set German type: and it is announced that the work will not be completed in less than three volumes, *i. e.* about twelve hundred similar pages. Thus, then, Diagnosis is verily to be treated *in extenso*, and Dr. Siebert is so far forward with his subject, that he is ready to pour out uninterruptedly on the reading medical public—one part in periods of six weeks!

The first question which occurs to us in looking at this microcosm of medical literature, is:—Are we to regard the work as new in its subject, or new only in its title? The diagnosis of special diseases has, in general been fully treated in monographs on those diseases; but here it is proposed to bring under one view the whole art of diagnosis in medicine, and to base it upon fixed principles.

Dr. Siebert divides diagnosis into *general* and *special*. The first volume is confined to the former; and under this head we find included *Anamnesis*,* Symptomatology, Semeiology, Synthetical and Comparative Diagnosis, and Prognosis. The author first lays down rules for the examination of patients by mensuration, percussion, and auscultation. This part of the subject is illustrated by a well-executed plate, in which the exact relative position of the different organs in the chest and abdomen is indicated by various colours in outline,—the body being placed in the front and back, as well as in the two lateral positions. Very minute rules are given for the external examination of the patient, and there are distinct sections on the application of chemistry and the use of the microscope, as aids to diagnosis.

One of the most curious and novel chapters in this part of the work is that which refers to the peculiar characters indicative of certain diseases or tendencies to disease:—the "*habitus*," or bodily condition. The most minute circumstances connected with the physiognomy, and mental or physical state of the person, are here enumerated: in short, it is the application of circumstantial evidence, derived from long experience and observation, to the determination of the nature of the disease, by rules wholly independent of any information conveyed by the patient or his friends. The young student is here furnished with the means by which the old practitioner is enabled, not merely to confirm his diagnosis from symptoms, but to test the truth of a statement as to the real existence, origin, nature, or seat of the malady.

The Anamnestic examination is described in about one hundred pages: it refers to age, sex, temperament, mode of life, and other circumstances, which may have led to the occurrence of disease or to some modification in its characters.

The subject of *special* diagnosis is commenced in the first volume with the examination of the heart; and the varieties and special characters of cardiac diseases. The author then passes to the explanation of the blood-vessels, and devotes considerable space to the pulse. After treating of the various morbid conditions of the venous system, he proceeds to examine the blood, with its physical and chemical properties, and the evidence which any variation in these is capable of furnishing. The abnormal conditions of this fluid are fully noticed, and the chemical and other methods for detecting in it the presence of bile, sugar, urea, and pus, are successively described. Chemical pathology, as it is known in modern times, is here put in requisition to aid the diagnosis of the practical physician.

From this brief analysis of that portion of Dr. Siebert's work now before us, our readers will perceive that it is a very comprehensive treatise; and should the remaining parts of the subject be equally well handled, it cannot fail to take its place as a standard work in medical literature. Whether it will ever appear in an English dress or not is another question. It comprises within itself that which the English practitioner can only find scattered through many distinct treatises: and we therefore think that a well-executed, and perhaps an abridged translation, would not fail to find English readers.

Medical Trials and Inquests.

WESTERN CIRCUIT.

Exeter, Friday, July 31, 1846.

(Before Mr. Baron Platt.)

Unlicensed Practice—Mistaken Strangulated Hernia—Charge of Manslaughter.

William Rowe was indicted for killing and slaying Elizabeth Munro, on the 20th of June, by treating her with gross negligence and want of skill.

Mr. Serjeant Kinglake and Mr. Cox were counsel for the prosecution, and Mr. Cockburn and Mr. Greenwood for the defendant.

---

* ἡ αναμνησις, *reminiscence*, the retrospective examination of a patient, involving all the facts connected with his physical and moral condition before he comes under treatment. Without the aid of Kraus's Lexicon it would be impossible to divine the meaning of one half of the professional terms now in use among our German brethren.

Mr. Serjeant Kinglake said the charge was, that the defendant, having assumed to attend, as a medical person, Mrs. Elizabeth Munro, had treated her with such neligence and gross want of caution, that she died. The defendant was not a regular medical man, and had no right to practise; he was a druggist, carrying on business at Devonport. The deceased was the wife of a shipwright, and about 61 years of age. She had for years been afflicted with a rupture. On the 19th of June last she was attacked with diarrhœa, and was induced by a neighbour to send for the defendant, who attended her and administered medicines to her, and the diarrhœa disappeared; but there then began an obstruction of the bowels, accompanied by severe vomiting, which continued a week. On the Sunday Dr. Budd was called in, and he found the lady suffering from strangulated hernia. An operation was performed on that day, and on the Tuesday following the patient died. According to the law, if any medical man, whether licensed or not, should be called in to attend a patient, he was presumed to possess competent skill for the treatment of the ordinary complaints he assumed to deal with. It was not imputed to the defendant that he administered the wrong remedies, so as to produce death, but it was for the unlawful omission of his duty to resort to proper means for the restoration of the health of the patient that he was now tried. In St. John Long's case, Mr. Baron Bailey had laid it down, that it mattered not whether he had received a medical education or not, but the point was, whether he had acted with due care and caution, or with gross and improper rashness and want of caution. Mr. Baron Bolland had laid down the law to be this:—That if any person, whether a regular medical man or not, professed to deal with the life or health of a subject, *he was bound to have competent skill to perform the task he held himself out to perform, and to treat the patient with care, attention, and assiduity.* The question, therefore, in the present case was, how far the defendant was responsible for the death of the deceased, in not finding out the cause of the obstruction.

Dr. Budd, Mr. Swayne, Mr. May, and other surgeons, who had been called in to see the deceased shortly before her death, were examined, and went into minute details as to the disease under which the deceased was labouring. In their opinion, as soon as a medical man had observed the state of this patient he should at once have proceeded to examine her person, to have seen whether hernia was not the cause of her illness, and they considered it a culpable act of omission that the defendant had not done so. They performed an operation, but it was too late, as mortification had already commenced. In their cross-examination they stated that they would not have met the defendant in consultation, as he was not a regular practitioner; it would have been contrary to etiquette to have done so. They believed he had a very large practice. To examine the person of a female was certainly a very delicate matter; but under this patient's symptoms there should have been no hesitation. A druggist had no right to prescribe even for a pain in the bowels.

Mr. Baron Platt said, that according to the testimony of these medical men a father must not administer a dose of rhubarb and magnesia to his children.

The witnesses, in answer to the learned judge, admitted that they had sometimes been wrong in their opinion as to the cause of illness of a patient, but they did not expect to be transported on that account.

The case for the prosecution having closed,

Mr. Cockburn was about to address the jury for the defendant, but

Mr. Baron Platt asked the jury whether they really thought this was such a case that they could convict the defendant of this serious charge?

The Jury replied in the negative, and returned a verdict of *Not Guilty*, and the defendant was discharged.

Remarks.—The result of this trial shows that there is not the slightest disposition either on the part of the public or of our law authorities, to prevent persons from practising an art which they have never studied, and of which they must be utterly ignorant. Did the prisoner possess competent skill; and did he devote proper attention and care to the case? Had he possessed any knowledge of the profession, he would have known what disease he was called upon to treat, and the deceased would have probably now been living. But because medical men may be sometimes wrong in an opinion, the prisoner was considered not to have been culpably wrong in this instance. A man pretending to be an architect without any knowledge of the subject of architecture, builds a house which in a fortnight tumbles down, and kills a dozen people. On examination it is found that a proper foundation was not laid; but we presume from the ruling in this case, that because professed architects make mistakes, the pretender, however ignorant and careless, is not culpable, and he is at liberty to go on building bad houses and sacrificing people's lives ad infinitum. Legal responsibility for the consequences does not rest with him who knows nothing about foundations;—but the fault is entirely with those who are foolish enough to live in houses which he builds! In cases where death does not follow, but bodily injury is done, the fact that mistakes are made by others would not exempt a man from being heavily fined in the shape of damages recoverable by a civil action.

Correspondence.

AMORPHOUS QUININE.

Sir,—My attention has been directed to the subject of *amorphous quinine* since the publication of Baron Liebig's paper, which has appeared in your journal. As it is part of the objects of the Institution to which I am attached to afford information to its members with reference to new or imperfectly known remedies, and to keep specimens that may be referred to as standards for comparison, it became my duty to make some experiments on quinoidine, and to provide a specimen of the amorphous quinine for the museum of the Pharmaceutical Society. This latter substance is very easily obtained by dissolving the impure residue of quinine manufactories, commonly called quinoidine, in diluted sulphuric acid, precipitating with ammonia, treating the precipitate with ether, and evaporating the ethereal solution to dryness. The product will be a transparent mass, having an amber colour and resinous appearance. This is the amorphous quinine, the composition of which Liebig has determined by analysis to be identical with that of ordinary crystallizable quinine, and which he has recommended as a substitute for the latter. Baron Liebig states, in his paper, "It is necessary that the amorphous quinine should be separated from all admixtures and impurities, and prescribed in its pure state."

Since the appearance of Liebig's paper, it has transpired that the preparation of amorphous quinine has been made the subject of a patent, "in order to protect the profession from errors or sophistication;" and the patented article is now supplied to the public as "the pure alkaloid of the cinchona bark, in the form under which it has been described by Professor Liebig."

I have made an examination of the compound sold under the above title, with the patentee's signature over the cork, and find it to possess the following characters:—It is in the form of a dark dirty-brown powder, having somewhat the appearance of powdered extract of jalap; when heated it agglutinates into a black pitchy mass, and emits a disagreeable smell; it is soluble in rectified spirit; it is soluble, also, in water, with the addition of a few drops of diluted sulphuric, or some other acid to each grain, and the solution thus formed has somewhat the colour of tincture of bark, and a very bitter, rather disagreeable, taste.

There is a wide difference between this substance and the amorphous quinine, made as described by Liebig; and this difference is especially made apparent on treating the patented article with ether. It is well known that quinine is readily soluble in ether, and Liebig states that his amorphous quinine is also soluble in that menstruum, but the patented amorphous quinine is not. On treating this latter with ether, part dissolves, forming an amber-coloured solution, while a large quantity of a black tarry-looking substance remains adhering to the sides of the vessel in which the solution is made. On drying this insoluble part, it forms a hard black mass, like pitch, and this constitutes 30 per cent. of the original powder. If the ethereal solution be submitted to spontaneous evaporation, a great number of crystals will be formed on the sides of the vessel, which present the characters of cinchonine, and the remainder, on being finally dried over a water-bath, assumes the characters of amorphous quinine.

It is thus evident that the substance sold as amorphous quinine, the preparation of which has been secured by patent, is not that which it purports to be, or that which Liebig has described and recommended, but is a very impure, mixed product, little better than the rough quinoidine from which it is made.

It is evident also, that so far from the profession being protected from errors or sophistication by this patent, the opposite effect is produced; the existence of the patent being the only reason why chemists, who would be incapable of offering for sale, as the pure alkaloid of the cinchona bark, a substance containing from 30 to 40 per cent. of foreign matter, have not proceeded to manufacture and supply the pure article, and thus, by fair competition, afford the public the best security against imposition.

Feeling assured that you will agree with me in the necessity of immediately making the profession acquainted with the facts I have here stated, I trust that you will give insertion to this communication in the forthcoming number of your journal.

I am, sir, yours obediently,

T. Redwood,

Professor of Pharmacy to
the Pharmaceutical Society of Great Britain.

19, Montague Street, Russell Square,
July 28, 1846.

*** For many reasons, it is much to be regretted that the amorphous quinine has been made the subject of a patent. This must tend to defeat the object of Baron Liebig in proposing it as a very cheap substitute for sulphate of quinine.

Medical Intelligence.

UNIVERSITY OF LONDON.

M.B.—FIRST EXAMINATION.—1846.

Monday, August 3.—Morning 10 to 1.

Anatomy and Physiology.

Examiners, Mr. Kiernan and Professor Sharpey.

1. Describe that portion of the side and basis of the skull, which is bounded in front by the orbital process of the frontal bone and by the posterior surface of the malar bone; behind by a vertical line passing behind the mastoid process to the posterior part of the condyle of the occipital; superiorly by a horizontal line passing over the squamous suture, and internally by the mesial line. Commence the description at the upper limit, and mention the parts in the order in which they are seen in proceeding towards the mesial line.

2. Give an account of the articulations of the scapula with the clavicle and humerus, describing the articular surfaces, the ligaments, the synovial membranes and the articular cartilages, and the proper ligaments of the scapula. Describe the movements which take place in these joints, and also those of the sterno-clavicular articulation, mentioning the muscles by which they are severally effected.

3. Give the anatomy of the rectum; describing the structure, form, and situation of the intestine, its bloodvessels and nerves, and its relations to the peritoneum and to other adjacent parts in the two sexes.

4. Give an account of the popliteal region, describing its form and boundaries, and the parts contained in it, commencing the dissection at the skin and carrying it to the bones.

5. Commencing at the integuments state the dissection required to show the course of the radial artery, from its origin at the bend of the elbow to the termination of the deep palmar arch. Describe the relations of the artery to other structures in the different parts of its course, and mention the branches in the order in which they arise, but describing the course of those branches only which are necessarily seen in the steps of the dissection required to expose the main artery.

Afternoon, 3 to 6.

1. Describe the intrinsic muscles of the larynx, mentioning their actions and explaining the chief uses to which they are subservient. Describe also the distribution of the laryngeal nerves, and state what is believed to be their respective functions.

2. Describe the parts met with in dissecting the branches of the portio dura of the seventh pair of nerves after they have emerged from the parotid gland.

3. State the dissection required to expose from the interior of the abdomen the obturator and epigastric arteries, the former from its origin to its entrance into the obturator foramen, the latter as far as the point where it becomes concealed by the sheath of the rectus muscle. Describe the parts brought into view in the dissection, the chief variations to which the vessels in question are subject, and the relation of these vessels to the inguinal and crural apertures.

4. Give a description of the dura mater; including its intimate structure, its extent and connexions in the cranium and vertebral canal, its relations to the cranial and spinal nerves, the arteries which supply the membrane with blood, and the venous sinuses contained in it.

5. Describe the structure and connexions of the tongue, and the blood-vessels and nerves distributed to it. Enumerate its principal movements and the muscles producing them, and state what are the most probable functions of its different nerves.

6. Give an account of the system of lymphatic vessels, describing their structure, and that of a lymphatic gland, their mode of origin, general course, and termination.

B.M. PASS EXAMINATION.—1846.

Tuesday, August 4.—Morning, 10 to 1.

Chemistry.

Examiner, Professor Brande.

1. What are the general effects of heat upon the different forms of matter? how are these effects theoretically explained? What are their principal influences in nature? State the different ways in which heat is propagated through solid, liquid, and aëriform bodies.

2. A spring water contains free carbonic acid, carbonate and sulphate of lime, chloride of sodium, and carbonate of soda. How would you ascertain the presence of these substances and determine their respective quantities?

3. What is the atomic constitution of alcohol and of ether? How is ether usually obtained, and what are the phænomena attendant upon its production?

4. In the analysis of an alloy of equal parts of lead, tin, bismuth, and copper, how would you separate the component metals and determine their respective quantities?

5. What are the leading proximate constituents of the blood? how are they chemically distinguished and separately obtained?

6. The bottles marked A and B contain saline solutions; they are accompanied by appropriate tests by which their respective

bases and acids may be recognised; you are requested to name these, and to write their respective symbols and equivalents.

Afternoon, 3 to 6.

BOTANY, MATERIA MEDICA, AND PHARMACY.

Materia Medica and Pharmacy.

Examiner, Dr. Pereira.

1. Describe the *Papaver somniferum* botanically: the method of preparing opium; and the process given in the London Pharmacopœia for the preparation of *Morphiæ Hydrochloras*. Enumerate the peculiar proximate principles which have been obtained from opium; and mention the chemical characters by which morphia, narcotina, and meconic acid are respectively distinguished. State the indications and contra-indications for the use of opium; and the dose of this drug, as well as of morphia.

2. Describe the method of preparing *Ferri Iodidum*; the properties and composition of this substance; the changes which it undergoes by exposure to the air; and its dose and uses.

3. How is the presence of nitric acid in acetic acid; of iron in sulphate of copper; and of carbonate of potash in iodide of potassium, to be respectively ascertained?

4. Enumerate the most important officinal narcotics, and explain their respective peculiarities of operation.

5. What are the doses of strychnia, veratria, aconitina, biniodide of mercury, and iodide of lead?

M.B. PASS EXAMINATION.—1846.

Botany.

Examiner, Rev. Professor Henslow.

1. Define, and give examples (when the case admits), illustrating the following terms: — Amentum, Cormus, Didynamus, Pedunculus, Sutura, Vitta.

2. Give diagnoses of the following orders: —Cruciferæ, Solaneæ, Colchicaceæ.

3. What are the more important characters in the following genera — Papaver, Centaurea, Teucrium, Crocus? Describe particularly the characters of the several floral whorls, fruit, seed, vernation, and æstivation.

UNIVERSITY COLLEGE.

Dr. Taylor has resigned the appointment of Professor of Clinical Medicine in University College, and of Physician to University College Hospital.

We understand that the unsatisfactory state of his health has induced Dr. Taylor to decide upon leaving London, and he has been elected Physician to the Infirmary at Huddersfield, in the county of York.

CORONERS' INQUESTS.

At a meeting of medical practitioners, held at Nottingham, on Friday, July 31, Dr. Hutchinson in the chair, the following resolutions were unanimously adopted:—

Moved by John Higginbottom, Esq., and seconded by John N. Thompson, Esq.,

That it is the opinion of this meeting that the present mode of conducting coroners' inquests in this county does not adequately promote the ends of justice.

Moved by G. M. White, Esq., and seconded by Joseph Thompson, Esq.,

That as it is impossible for any coroner who is not a medical man, always to know when medical evidence is necessary, and as he might choose to dispense with it in cases where it would be absolutely essential to the finding of a correct verdict, it should be unlawful for a coroner to hold any inquest without taking the evidence of a duly qualified medical man: except in those cases where the cause of death is so obvious as not to admit of any reasonable doubt.

Moved by Henry Taylor, Esq., and seconded by Dr. Phillimore Stiff,

That in all cases where a legal investigation of the cause of death is required, it shall not be deemed sufficient to record the following vague and indefinite verdicts—viz. "Died by the visitation of God," "Death from natural causes," "Found dead," "Overlaid," &c. &c., but that the true and proximate cause should always, if possible, be stated.

Moved by A. Ebsworth, Esq., and seconded by A. Darby, Esq.,

That a committee be formed to procure from the coroner of this town and county, retrospective statistical information in support of the foregoing resolutions.

Moved by W. Small, Esq., and seconded by G. E. Stanger, Esq.,

That a copy of these resolutions be forwarded to the Editors of the Medical Gazette, the Lancet, and the Medical Times, with a request that they would insert them in their respective journals.

⁂ We shall make some remarks upon this subject shortly. The present mode of electing coroners, and of holding coroners' inquests, is, in our opinion, disgraceful.

FEES TO MEDICAL WITNESSES IN FRANCE.

English medical practitioners are accustomed to complain, and in our opinion most justly, of the paltry remuneration which they receive for rendering services as medical witnesses to coroners, magistrates, &c. The following letter, which appeared in a late number of the *Gazette des Hôpitaux*, shews that in France professional men are treated even worse than they are in England.

On the 14th July, at the opening of the Northern Railway, a labouring man was run over and killed by an omnibus. The writer, a physician, was ordered by the Attorney-General to inspect the body and draw up a report. This was accordingly done in company with a Dr. L. The inspection (made under a temperature of 74°) and report occupied about four hours, and the legal expenses allowed were as follows:

For inspection of body . .	5 francs
For the report	3
	8 francs.

That is to say, the sum of 3s. 4d. was allowed to each physician as compensation for his skill, trouble, and loss of time! The affair did not end here. The driver of the omnibus was charged with having caused death by negligence, and a summons was served upon the writer, under the penalty of imprisonment, to attend and give evidence at a certain day and hour. He attended punctually at the court, but finding no officer there, after waiting some time he went away. The case came on for hearing about two hours after the time appointed. The unfortunate physician was then two leagues away, attending to his patients. It was heard in his absence, and the omnibus driver was fined five francs for his neligence, and the physician *ten francs* for his non-attendance as a witness! Thus the unfortunate practitioner had not only to pay back the four francs received as his share of fees for the inspection and report, but to pay six francs in addition, which will probably be temporarily advanced as a fee to some future medical witness!

If these are the principles by which the payment of medical witnesses is regulated in France, we should think that charges for medical evidence cannot form a large item in the national expenditure. On the contrary, by the advance of four francs to the witness, and in following the ingenious plan above described, by the subsequent imposition of a fine of ten francs upon him—a sum which he could probably earn during the two hours he is required to wait—the government will not only obtain medical assistance gratuitously, but annually realize a tolerable sum by this mode of taxation. Medical witnesses are paid badly enough in England, but we never heard of a case so flagrantly unjust as this.

THE QUEEN'S COLLEGE AT BIRMINGHAM.

The Queen has been graciously pleased to issue her Majesty's warrant under the sign manual, to authorize "the right trusty and well beloved the Principal, and the trusty and well beloved the Vice-Principal of the Queen's College at Birmingham, to issue to such persons as may be desirous of becoming candidates for the respective degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, or Doctor of Laws, to be conferred by the University of London, certificates to the effect that such candidates have completed the course of instruction which the Chancellor, Vice-Chancellor, and Fellows of the said University of London, by regulation in that behalf, shall have determined."

THE BLUE COLOUR OF LIGHT TRANSMITTED THROUGH GOLD LEAF.

The coloured light seen on looking through gold leaf, which is blue, according to M. Dupasquier, but decidedly bluish-green, according to our observation, is not, in the opinion of that chemist, peculiar to gold, but is observed in regard to all opake bodies when reduced to a certain degree of tenuity, either in the form of leaf or in the state of a fine pulverulent precipitate.

If the phenomenon be more decided with regard to gold leaf, it is because its malleability is very great and exceedingly uniform. Cæteris paribus, yellow, reddish yellow, or red substances give to the liquids in which they are suspended a colour which is of a deeper blue than that given by bodies differently coloured,—thus bearing out the view of M. Chevreul, that the transmitted, is the complement of the reflected colour. Metals and metallic compounds of an iron grey hue are also, when fairly reduced, blue by transmitted light. M. Dupasquier's experiments were confined to silver, copper, and an alloy of gold and silver in the state of leaf; and to silver, mercury, antimony, bismuth, and arsenic in the state of powder. A large number of metallic compounds, when finely pulverized, also showed the blue light. The cause of this phenomenon is commonly referred to the interception of all the rays of light excepting the blue, by the finely-divided particles of bodies. M. Dupasquier thinks that the blue colour of glaciers and of deep lakes and seas may be due to the suspension or diffusion of finely-divided substances through the solid or liquid. In lakes and seas, however, the light is seen by reflection, not by transmission. He particularly insists that his experiments show the phenomenon to be one of a general kind, existing in all opake bodies, and that it has no relation to the specific nature of the body. We must compliment him upon the ingenuity of his experiments, but we doubt whether his conclusion will be found satisfactory, or in accordance with facts observed by others. Professor Faraday has shown the colours of these metals in a perfect manner by means of the oxhydrogen light transmitted through them, and the colour of gold and silver were so essentially distinct, that the admixture of silver with gold might be inferred from the deep blue cast which was given to the green colour of the light transmitted through pure gold leaf*. Gold and silver are brought to a state of infinitesimal division by the addition of a drop of an alcoholic solution of phosphorus to their respective solutions.

THE WORKS OF LAVOISIER.

THE French Government lately proposed to the Academy of Sciences the question, whether the publication of the complete works of the celebrated chemist Lavoisier would be attended with any national benefit in a scientific point of view. The question was referred by the Academy to a committee of chemists; and through M. Dumas they have recently reported that a complete edition of the works of Lavoisier, published at the national expense, would be of great benefit to science.

The first memoir published by Lavoisier was on the analysis of plaster, and appeared in 1768. His first academical work, on the nature of water, is dated 1770. From this year up to 1790, he published in the Memoirs of the Academy, seventy-eight papers, the subjects of which may be regarded as constituting the basis of modern chemical science. Independently of these, there are thirteen reports on various scientific subjects, and on public economy, a Treatise on Chemistry in two volumes, a volume on Chemical Nomenclature, and a volume of Opuscula. The whole of these works will cover about three thousand pages quarto, and the Committee estimate the expense of reprinting them at £2400.—*Comptes Rendus.*

This proposition is very creditable to the French Government. It will, we fear, be long before the researches of the English contemporaries of Lavoisier — Priestley, Cavendish, Crawford, and others, will be reprinted at the public expense in this country.

ERGOTINE AS A STYPTIC IN WOUNDS OF ARTERIES.

M. BONJEAN has strongly advised the use of ergotine (ergot of rye) to arrest hæmorrhage from wounded arteries. It is stated that in a recent experiment he divided the right carotid artery of a horse by a transverse incision which comprised one-third of the circumference of the vessel. The hæmorrhage was speedily arrested by the application of ergotine.

M. Velpeau, in commenting upon these experiments, observes that two circumstances are invariably forgotten by experimentalists: 1. That the blood of animals is much more plastic than that of man; hence, what may prove a styptic in one case, will fail in the other. Wounds of large arteries in the horse, ox, and sheep, rarely prove fatal by hæmorrhage. This ceases spontaneously after a certain time; and this natural result gives the impression that the cessation is due to the application of the remedy: hence the number of styptics which have been successively brought before the profession, and then have fallen into desuetude. 2. In the human subject many arterial hæmorrhages cease either spontaneously, or on the application of slight pressure, so as to render the application of a ligature unnecessary. The result is then erroneously attributed to the substance applied. Those practitioners who have used ergotine, or ergot of rye, in hæmorrhages, have obtained no conclusive results; and if in uterine hæmorrhage during labour, this substance has been found useful, its mode of action is probably that of causing the uterus to contract upon itself, and not by exerting any specific influence on the blood or the arteries.—*Comptes Rendus.*

INJURIOUS EFFECTS OF MERCURIAL AMALGAM FOR STOPPING THE TEETH.

DR. TALMA objects to the use of silver amalgam for stopping the teeth, on the ground that it is liable to cause salivation, that it darkens the teeth, that it irritates the gums, leading to ulceration, that it aggravates caries, and often renders extraction absolutely necessary.

Dr. Talma especially condemns the amalgam of silver and mercury introduced in 1819, and known as Bell's composition; also in later times as mineral succedaneum. This amalgam, when first prepared, is quite soft, but it speedily hardens in the hollow of the tooth, and this facility of application has caused it to be extensively employed. Dr. Talma quotes many instances of the injurious effects produced by it. He states, that by the slow volatilization of the mercury it is apt to become porous and fall out, or allow the food to penetrate into the cavity. Under no circumstances should amalgams be used by dentists. Gold and tin are the only metals which should be employed for stopping teeth.—*Gaz. Méd. et Journal de Pharmacie,* Juillet 1846.

⁂ Dr. Talma has determined to make out a case in some way or other against the use of mercurial amalgams. In some instances the caries is so advanced that the tooth will not bear the pressure necessary for the safe introduction of gold or tin; and dentists must then resort to the extraction of the tooth or the use of silver amalgam.

---

* See Vol. xxxv. page 50.

The serious, and only objection to its employment, is the slow darkening of the tooth by the conversion of the metals to sulphurets under the slow action of the sulphur salts and sulphur in the saliva. The salivation, ulceration, &c. observed by Dr. Talma, were most probably due to other causes.

ON THE MEANS OF REMOVING ARSENIC FROM COMMERCIAL SULPHURIC ACID.

M. Dupasquier has recently published in the *Journal de Pharmacie* a long paper on the contamination of sulphuric acid with arsenic, and on the most simple and economical means of purifying it. The conclusions at which he has arrived are :—

1. That the use of arsenical sulphuric acid in commerce, and in the preparation of chemical, pharmaceutical, and culinary compounds, is liable to be attended with dangerous consequences.

2. That the arsenic in commercial sulphuric acid is always in the state of *arsenic acid.*

3. That the proportion of arsenic present is subject to variation, but may be estimated on an average at from one-thousandth to one-fifteen hundredth part.

4. That the use of hydrochloric acid, or hydrosulphuric acid gas, is inadequate to the purification of arsenical sulphuric acid.

5. That the alkaline sulphurets afford an easy and certain method of removing arsenic from sulphuric acid.

6. That the sulphuret best adapted for purifying sulphuric acid is the sulphuret of barium. The process is certain, expeditious and economical; and the sulphuret not only separates all the arsenic, but destroys any nitric acid which may be accidentally present.

We subjoin an outline of M. Dupasquier's plan. The arsenical sulphuric acid is taken as it is removed from the leaden chamber at a specific gravity of about 1·35. If very concentrated, the arsenic contained in it is not so easily precipitated. The acid is heated in a leaden vessel to about 212° by means of a vapour bath. The precipitation is found to be much facilitated by a high temperature. The sulphuretted hydrogen evolved on the addition of the sulphuret of barium to the impure acid, should be ignited and burnt. The quantity of sulphuret of barium required for purification must depend on the amount of arsenic in the acid. Some preliminary trials might be made to determine this point. M. Dupasquier found as a general rule that one part, or at the most one part and a half of sulphuret of barium, was quite sufficient for the purification of five hundred parts of arsenical sulphuric acid. The sulphuret should be used crystallized. The decomposition then takes place more slowly and perfectly; and less sulphuretted hydrogen escapes. It may be observed that the decomposition consists in the reaction of sulphuretted hydrogen in the nascent state upon the arsenic acid, and the production of sesquisulphuret of arsenic and sulphate of barytes. The precipitate should be allowed to subside, and the acid liquid then decanted off clear. This process has been successfully adopted with 1200 pounds of sulphuric acid at once. The acid when examined by Marsh's process after the operation, gives no indication whatever of the presence of arsenic.

STATE OF THE PUBLIC HEALTH IN THE SPRING QUARTER, ENDING JUNE 30TH, 1846.

"The quarterly returns are obtained from 115 districts, sub-divided into 576 sub-districts. Thirty-four districts are in the metropolis, and the remaining 81 districts comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,579,693 in 1841." 43,582 deaths were registered in the spring quarter ending June 30th—a number greater by 2,853 than were registered in the corresponding quarter of 1845, and 4,731 more than in the June quarter of 1844. The mortality was a little lower than in the preceding mild winter quarter, when the deaths were nearly 5,000 less than the average. The districts of Lancashire and Yorkshire were the most unhealthy. Taking the whole of the 115 districts, the mortality was above the average in the spring quarters (ending June 30th) of 1839, 1840, 1846; and below the average in the spring quarters of 1841, 1842, 1843, 1844, 1845. There was an evident tendency to decline through the 8 years; but in 1846 this tendency was counteracted, and the deaths exceeded the calculated average.

The inadequate supplies of water by companies, the imperfect sewerage in towns, the open drains and ditches, and the general neglect of cleanliness, leave everywhere great quantities of organic matter to decay and putrefy in the midst of crowded populations. In such circumstances the mortality, like putrefaction, is always increased when the temperature is high; and epidemics of diarrhœa, dysentery, and cholera prevail. Many thousands of the people of England were carried off in the last quarter by these diseases and others of the zymotic class. The deaths in the quarter were 43,582. If the mortality had not been higher in the towns than in the poor country districts where the air is purer, the deaths in the quarter would not have exceeded 33,000.

Within the last three months ten thousand lives have been destroyed in a part only of England by causes which there is every reason to believe may be removed.

In the metropolis the deaths at the close of June from diarrhœa, dysentery, and common cholera, rose to to 40 weekly, and have since increased. Nor is that to be wondered at. Notwithstanding the improvements effected when cholera was last epidemic, the foul untrapped sewers and the ground areas of the best streets emit noisome smells and volatile poisons, which are as fatal as arsenic to a certain number of persons. London is surrounded too by stagnant, putrid ditches, as some cities are by walls. It would be well not to wait carelessly until cholera reaches the country, but to "look before," remove these nuisances, and purify the reeking atmosphere, which gives the disease breath, life, and being. These remarks apply with tenfold force to Liverpool, Sheffield, and the towns of the north, where the epidemics in the last quarter were more fatal than they had ever been before, and diseases were in proportion to the population at least one-third part more numerous than in London. The prevailing epidemics are mentioned in the Registrar's Notes, to which I refer for much useful information.

The mean temperature at Greenwich of the 13 weeks ending June 27th is 55° which is 2°·3 above the average of 25 ye and 3°·3 above the average of the con ponding quarter of 1845. The temperat is very little above the temperature of same season in 1844, when the wheat c was so abundant; 5½ inches of rain h however, fallen in the present quarter, the winter of 1846 was of extraordin mildness, while the winter of 1844 was more than the average severity. The hig point of the thermometer in the shad Greenwich was 87°·0 on June 20th; lowest 33°·3; the extreme range was th fore 53°·7. The highest point in the was 116°·5, the lowest on the grass 21 to these extremes, differing 95°·5. veg tion was exposed. The temperature of Thames was 59°·4 in the day, 58°·3 in night. The water was on an average warmer than the air. The dew point 48°·3. The air wanted 6°·8 of saturati and was much drier than the spring of 18 but not so dry as the same season of 18 The sky was more clouded than in 18 and there was less wind. In the sp quarter of 1844, the mean weekly amo of horizontal movement of the air was miles; in the same quarter of 1846 it only 655 miles. The barometer 29·919 inches in 1844, and 29·740 in in 1846.

Metropolis.	Population	Deaths registered in the Quarter ending June 27th.						
		1840	1841	1842	1843	1844	1845	18
West Districts . .	301,326	1,689	1,569	1,640	1,805	1,802	1,843	1,
North Districts . .	366,303	2,000	1,964	1,894	2,206	2,191	2,130	2,
Central Districts .	374,759	2,081	2,170	1,986	2,304	2,044	2,056	2,
East Districts . .	393,247	2,218	2,144	2,182	2,496	2,433	2,389	2,
South Districts . .	479,469	2,964	2,748	2,725	2,810	3,001	2,849	2,
Total	1,915,104	10,952	10,595	10,427	11,621	11,471	11,267	11,

A Table of the Deaths in the Metropolis, from all causes, registered in the quarters ending June 1845-46.

Causes of Death.	Quarters ending June 1845.	1846.
ALL CAUSES . . .	11267	11271
SPECIFIED CAUSES . .	11231	11235
Small Pox . . .	246	87
Measles	322	163
Scarlatina . . .	201	177
Hooping Cough . .	463	545
Croup	83	67
Thrush	45	40
Diarrhœa . . .	84	153
Dysentery . . .	17	18
Cholera	2	9
Typhus	308	364
Sudden Deaths . . .	152	129
Hydrocephalus . . .	456	
Apoplexy . . .	252	
Convulsions . . .	641	
Bronchitis . . .	272	
Pleurisy	28	
Pneumonia . . .	869	
Asthma	203	
Phthisis or Consumption .	1819	1
Disease of Lungs, &c. .	207	
Pericarditis . . .	29	
Aneurism . . .	11	
Disease of Heart, &c. .	379	
Teething . . .	163	
Childbirth . . .	104	
Violent Deaths . .	311	

⁂ We have looked over the Registr notes, but they call for no particular marks. Hooping-cough appears to l been a very fatal disease during the quarter. The cases of death from small-pox are not very numerous, and with but few exceptions these occurred among the unvaccinated.

ELECTION OF MEMBERS OF COUNCIL AT THE ROYAL COLLEGE OF SURGEONS.

In a report published in a contemporary journal respecting the election of fellows, which lately took place at the Royal College of Surgeons, it is stated, that "the name of Mr. Skey was passed over in silence, which appeared to be a matter as well of surprise as of regret to most present," &c. A respectable correspondent, who sends us his name and address, conceives that this paragraph, by singling out Mr. Skey as the only individual passed over, is likely to convey a false impression. He assures us, on good authority, "that the name of Mr. Hale Thomson, Surgeon to the Westminster Hospital, was called three several times, and met with no response from the assembled fellows. There can be no question that as a matter of common fairness, if the name of one individual passed over is mentioned, the names of all should be published.

Selections from Journals.

SURGERY.

CASE OF TRAUMATIC TETANUS, SUCCESSFULLY TREATED. BY WILLIAM GILLARD, ESQ. TOTNESS.

December 28, 1838.—R. L——, aged 20 years, a healthy young man, received the whole charge of a gun in the front of his right thigh, about midway between the hip and the knee. I saw him within an hour of the accident; the wound was nearly circular, about two inches in diameter, with some shot, portions of wadding, and [a piece of] his cloth trowsers protruding from it, but so firm that I did not consider it prudent to remove them by force, the bone being uninjured. I ordered him to bed, to be kept quiet, and have a cold lotion constantly applied. The patient appeared to be doing well until January 28th, when I was called to him in the afternoon. He had trismus and opisthotonos to a great extent; pulse 80, tense and thrilling. I bled him without regard to quantity until syncope was produced, and ordered him five grains of calomel and half a grain of tartarised antimony every four hours, with one ounce of aperient mixture; the poultice to be continued, and the cold lotion applied as before.

19th, *Mane.*—Had a restless night; pulse 80; bowels moved during the night; spasm continues. Bled him as before. Repeat the medicine, and an enema, with two ounces of spirits of turpentine and one ounce of castor oil, was ordered.

Vespere.—Altogether a little relieved, and pulse softer.

20th, *Mane.*—Had some sleep; bowels freely opened; pulse 80, but more compressible. Half a grain of tartarised antimony, and six grains of camphor, with one ounce of aperient mixture, every four hours.

Vespere.—Pulse harder; spasms returned. Bled him as before.

21st, *Mane.*—Restless night; spasms continue; pulse 80; wound looking well. Lotion continued; bleeding repeated, and aperient mixture every four hours, with three grains of calomel, half a grain of tartarised antimony, and four grains of powdered scammony.

Vespere.—Quieter and more comfortable. Bowels moved.

22d, *Mane.*—Night restless, with occasional spasms; pulse 80; bowels acted on repeatedly during the night. Bled him as before.

Vespere.—He was altogether relieved. Pulse 96, soft, and compressible; skin moist, having been from the 18th dry and hot; free from spasms, and inclined to sleep. I now ordered him one grain of opium and three grains of camphor, in a pill, every three hours, with a simple saline draught in a state of effervescence; and, as he continued to improve, I followed the same plan of treatment on the 29th, with very slight occasional alteration, and now and then an aperient draught. The cold lotion was used on the 24th. On the 27th the last shot, and a large piece of the trowsers, came away. On the 31st I applied a bandage.

February 8th I ceased my attendance, as he was quite well. He has never since felt the slightest inconvenience. — *Provincial Med. and Surg. Journal.*

TREATMENT IN CASES WHERE FOREIGN BODIES HAVE BEEN SWALLOWED.

Chelius observes: In order to protect the stomach and intestinal canal against the effects of any such body, mucilaginous ensheathing food, and especially antiphlogistic treatment and purgatives, to hasten the passage of the foreign body through the alimentary canal, must be employed. To this Professor South adds. This is the practice usually employed; but I am not sure that the late Sir Francis Chantrey's proceeding under similar circumstances is not preferable. He had accidentally swallowed the gold fastening of one of his teeth, and, being much alarmed, came to my friend Green, to consult with him about the matter, at the same time suggesting the propriety of eating freely of suet pudding, with the hope of entangling the little gold plate, and favouring its passage through the bowels. Green saw no particular objection to this proposition, and accordingly a due quantity of the medicinal pudding was swallowed. Nothing more was heard or seen of the tooth plate, and whether passed or not is unknown, but it never gave any inconvenience.—*Notes to the Translation of Chelius*, p. xii.

ANIMAL CHEMISTRY.

CAN A SUBSTANCE BE OBTAINED FROM ALBUMEN, &c. FREE FROM SULPHUR? IS THERE SUCH A SUBSTANCE AS PROTEINE?

In all of these kinds of fibrine (of fish), sulphur could be readily detected; nor was it found possible by any of the methods which have been hitherto described, to obtain either from fibrinous matter or from albuminous substances, a body destitute of sulphur. The analysis of the milk detailed in a previous part of the report, afforded excellent opportunities of testing the accuracy of the idea supported by some of the continental chemists, that a substance can be obtained by the action of potash upon albuminous substances which contains no sulphur. On repeating the experiments that have been detailed in books upon a considerable scale with caseine or curd of milk, which were carefully conducted by William Parry, Esq., late of H.M. 4th Regiment, it was uniformly found that the resulting product contained sulphur. By this statement, certainly it is not meant to infer that such a substance may not exist, but only that the writer has not been able to procure such a substance as proteine by following most scrupulously the directions supplied by its original describer, and others who have copied his descriptions. His scepticism on this subject originated some years ago, when engaged in researches on the brain, an abstract only of which has been published in Liebig's edition of Geiger's *Pharmacie*. The process of analysis for this intricate combination consisted in dissolving the albuminous part of the nervous system in dilute caustic potash; a reagent which exerts no soluble power on the peculiar matter of the brain, but combines with it, forming an insoluble salt. The potash solution, on being withdrawn from the insoluble matters, yielded by neutralization with acetic acid a substance which ought to have been *proteine*, because it was obtained by precisely the same process as that which has been described as the best for procuring that substance. But on dissolving after washing in potash, adding acetate of lead, and boiling, it gave an abundant black precipitate, indicating the presence of sulphur. This experiment was shown to Prof. Liebig by the writer at the time (1842), and it is believed that that distinguished chemist considers the existence of proteine problematical.—*Dr. R. D. Thomson.*

*** Some remarks on this subject will be found at page 440 of the last volume.

BIRTHS & DEATHS IN THE METROPO

During the week ending Saturday, July

BIRTHS.		DEATHS.		*Aver. of 5*	
Males....	623	Males....	513	Males....	
Females.	620	Females.	490	Females.	
	1243		1003		

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population*, in 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326) 1

NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303) 1

CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London .... (Pop. 374,759) 1

EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar .... Pop. 393,247) 2

SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich .... (Pop. 479,469) 2

Total 10

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Summers; Col. B. of 5 Years.

		A.	B
ALL CAUSES	1003	898	96
SPECIFIED CAUSES	991	892	96
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..	308	201	18
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c. of uncertain seat	115	99	10
3. Brain, Spinal Marrow, Nerves, and Senses	158	155	15
4. Lungs, and other Organs of Respiration	199	227	29
5. Heart and Blood-vessels	27	23	2
6. Stomach, Liver, and other Organs of Digestion	87	87	7
7. Diseases of the Kidneys, &c...	16	6	
8. Childbirth, Diseases of the Uterus, &c.	7	9	1
9. Rheumatism, Diseases of the Bones, Joints, &c...........	8	6	
10. Skin, Cellular Tissue, &c.	3	1	
11. Old Age	38	52	6
12. Violence, Privation, Cold, and Intemperance	25	26	2

The following is a selection of the number of Deaths from the most important special cause

Small-pox	3	Convulsions	
Measles	6		
Scarlatina	11	Bronchitis	
Hooping-cough ..	39	Pneumonia......	
Diarrhœa........	156	Phthisis	
Cholera..........	26	Dis. of Lungs, &c.	
Typhus	36	Teething	
Sudden deaths ..	2	Dis. Stomach, &c.	
		Dis. of Liver, &c.	
Hydrocephalus ..	32	Childbirth	
Apoplexy........	21		
Paralysis........	11	Dis. of Uterus, &c.	

REMARKS.—The total number of deaths w 105 above the summer and 35 above the annu average. The deaths from Zymotic diseas were much above the average, chiefly owing t the prevalence of diarrhœa among young childre In all the districts, the mortality was abov the summer average.

Lectures.

A COURSE OF LECTURES ON

ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

BY PROF. FARADAY, D.C.L., F.R.S., &c.

LECTURE V.—May 23d, 1846.

General differences between the electricity of the machine and battery — between electricity and magnetism — early attempts to discover the relation of these powers—Oersted's discovery in 1819—Attraction of the magnet by machine electricity—effect of current electricity—its action on the needle—divergence right or left according to position with respect to the current—water magnetized by the passage of the current—its influence on the needle—use of the galvanometer—the principle of its action explained—the Astatic galvanometer—an electric current proved to be produced by contact of two metals with the tongue—by contact of metals with hot milk—also in other cases—the mutual effect of electricity and magnetism a tangential and not an attractive or repulsive force — electro-magnetic motion of bodies—a peculiar character of this motion—differs from all other natural phenomena—the moving power and moving bodies carried round together.

OUR attention to-day must be almost entirely directed to the consideration of the relations between the two powers which we call magnetism and electricity. Let me remind you how extremely varied these powers are in their general effects considered separately.

We obtain electricity by the friction of bodies one against another, and, when obtained, we retain it by conductors, surrounding them by non-conductors, such as glass. When we obtain electricity in such a degree as to show sensible traces of its presence, it then endeavours to fly away, to disperse itself abroad in the most ready manner, and to attract substances that are near to it.

On the other hand, when we obtain electricity by the voltaic battery, which I shall again use to-day, though we have it in great abundance, raising it most freely in metallic substances, its *quantity* here is so small, that my hand, or the table, and the other things about it, do not carry it off. These two wires which rise upon the table before me are as well insulated, respecting the electricity that comes from the battery, as if this table were a mass of glass, so that we have the electricity, not in a condition to pass off quickly, but ready to be used only when we complete the circuit. On the other hand, when you have an artificial magnet or loadstone, you have a power in many respects like electricity, a duality of power, a north and south attraction of magnets in one state, and a repulsion of them in another state. But then you have all these curious analogies, the relation of these powers, with this difference, that with regard to magnetism the force requires no excitement, while electricity wants exciting either by the machine or by other means. In the battery, however, it is ready, waiting to be used like gravitation in matter. In place of flying away as electricity does, and passing to a distance, I may touch the magnet with my hand, or any good conductors, and the magnetism still remains. It is in the substance before us, and we find it by the process I showed you last week. When we proceed to make a magnet,—which I showed you I could do by the use of the natural magnet, and, so to say, create a certain power in that piece of iron,—we do not take power from these wires of the battery. In electricity, when I communicate it from one source to another, I take it away from one and give it to the other. But magnetism remains in the magnet, and we can develope and convey power from other parts of matter equally good conductors of electricity, yet without destroying or diminishing the original source. What strong contrasts, yet what beautiful analogies, thus exist between these two kinds of power! These ordinary relations, these points of difference, have led philosophers, from the earliest times of which we have historical record, to look for something which shall tie the two powers of electricity and magnetism together. In more modern times, particularly by experience and observation, we have learned better how to examine nature as to facts, and to develope the principle which appears to govern all things. Philosophers have tried more and more to ascertain what was the real tie—for they assumed there was a tie—between these beautiful forces of magnetism and electricity. It is very strange that so long a period should have elapsed before this connexion was discovered. Although there was a strong suspicion, and with some a firm conviction, of the identity of the two forces, it is strange to think that until 1819 we should have had no true knowledge of this kind. It does some degree of honour to the human mind to think that, by comparing the phenomena of these two forces, philosophers should see that there was most likely an analogy, a tie, a relation between them; but it does small honour to their acuteness that they did not discover it before; for now it shines forth with such strength, clearness, and simplicity, that it is difficult to imagine how they could touch an electrical machine or a magnet without making the discovery. Oersted was led to suppose there was a close relation between magnetism and electricity in 1819; and by inductive reasoning he was led to the discovery.

To-day I purpose pointing out the main part of Oersted's discovery, and to take you on to the results discovered by him and other men in after times. As we proceed, you will find that every fact which comes out renders it surprising that the discovery was so near at hand, and yet not made. I have no doubt that, as I proceed, very few who have not considered the subject would be able to anticipate, from the closest application, what would be the next step to which philosophy would conduct us in this investigation.

I must beg your attention, not to many things, but to the first principles of the mutual action of electricity and magnetism. If we take electricity from the machine, it attracts the magnet. Putting up a magnet, and bringing it near the machine, this piece of matter (a magnetic needle) will be observed to fly about. Whether that bar were a magnet or not, it would be equally affected by electricity produced from the machine; but we find that the real relation between electricity and the magnet is in the current form of electricity. You see it not in the machine, and the Leyden jar which burnt the gold leaf, but in its more quiet condition, i. e. in the electric current of the battery. Now I have behind me a very moderate electrical machine in the form of a galvanic battery. I am following the power through different stages of its progress, which serve to make it visible. It is supplying us with means to see part of the circuit through which the power of Grove's battery may be used. I shall not employ to-day more than from two to ten pair of plates. The wires are running under the ground, and communicating under the table; here are two holes, and here are others, where we can bring the wires out and make the circle complete. I have fastened these wires to the two branches that come from the apparatus, and when contact is made I shall have the circuit complete. He has a spark there; therefore I know we must have the current through this arrangement.

Now this wire contains all the secrets and mystery of Oersted's discovery, and that intense degree of magnetic force which we can artificially produce in consequence of his discovery enlarged by Davy and others. And first, for the effects. Here is a magnetic needle, and you are aware that we judge of the existence of magnetism in bodies by bringing a test needle upon them. Here is an iron bar; if I bring it near the middle, I get repulsion. It is not merely a piece of indifferent iron, but it is a magnet, because one end is in the same magnetic state as the end of the needle which is repelled. If I take a copper wire, or wood—not iron, nickel, or cobalt—and examine it by the needle, or the needle by it, no effects take place. If there is no electric current, I have no effects. Here is a piece of wire: it can be made at pleasure a part of the circuit, and here is the result of Oersted's discovery. I have placed the magnetic needle on the wire in its longitudinal direction, and you see they are perfectly indifferent to each other; but the moment the current goes through the wire you will see the effect. First, I will ask you to observe the great effect it produces on the needle. Now contact is broken it goes to a state of rest; it is indifferent. When contact was made we had the power of the magnet developed. The next point I ask you to observe is what the needle does. It is left in motion, but it takes up a certain new position; if I let it vibrate long enough it will take up a position in a definite direction. Here is the natural position (north and south). I keep it under the influence of the wire, and as long as the current is going through the wire, that is the position it will take between the wire and the earth. The white end of the needle (north pole) is under the wire; we shall break contact, and you will see the effect; after a few vibrations it will take its natural position in the room. You must not suppose it will be perfectly true in this room, for we are here subject to a variety of incidental effects from the iron in the pillars around us. There is the needle placed before the wire, and the moment the current goes through, though it is but a small copper wire, the end towards me moves to your right hand. The slightest change, putting the wire below instead of above the copper wire, will alter the position of the white end (the north pole). It is now in an opposite direction; the white end goes to your left hand instead of the right, and there it would stand. On breaking the contact it becomes indifferent. I will take the opposite side, and there you reverse the direction of the needle when it is subjected to the wire. If I move it a little further, which I can do, I find it is not merely the horizontal needle which shows you this effect, but any needle. If I put it this way or that, so that it shall move vertically instead of horizontally, you see how the white end (north) points downward in consequence of the current. It will not return. If I put it on the other side of the wire the black end goes down, so that you get an apparently opposite effect. All this complexity of condition is only because we are turning the wire round; it is simply the result of putting the needle thus across the line of the wire. Here is the striking beauty of the discovery; the extraordinary difference between the direction of the wires, or of the wire upon the needle, prevented philosophers from observing it before. They looked for polarity, as the needle would attract and repel. There is nothing like it. The wire does not attract the needle, it does not attract the north or south pole, but drives the poles in opposite directions across it, so as to take another position, there always being the black end on one side as you travel round, the white on the other, the current being in the same direction. Observe this! if I change the direction of the current, because both these powers have a duality about them, there is a doubleness, so to say, in the electricity as well as the magnetism. If I change it altogether, I change the direction in which it will go. Mark the current; the white now goes to the right hand. We now change the current; we change the wire from one end of the battery to the other, and it goes to the left. I sent the current in one way, and the needle went in one direction; I sent it the other, and the needle goes in the other direction. But this will be best explained by a rough model which I have here, and the rougher the better; the going from right to left is only a change of position of the needle with respect to the current. These things have always the same relation one to another, and when you have got over this, you have got over the perplexity of the subject.

The next point I must mention to you is, that every substance capable of conducting electricity may exert this kind of power. When we look at electricity, we have it retained by certain bodies; but we can electrify all bodies. When we look at magnetism, we have it only in certain bodies. I will only take one strange circumstance to satisfy you. This is the proof, viz. taking water, or water mixed with acid: if I show you, when electricity goes through a portion of water, it receives power to affect the needle, it is as good an experiment as can be to set your mind free from the idea that the electricity belongs to the metals; wherever the current is, it can affect the magnet whatever be the nature of the medium traversed. Here I have a little trough of water, and I place a magnetic needle over it; this trough, when it conveys the current, takes the place of the metallic wire. I can, by means of these wires, make a connexion between this battery and the water, so as to get the current through it. When contact is made, the end of the needle will be raised, though we shall not have so much movement as before, because it is farther from the axis; yet I hope you will see the body move.

We are now making contact. Look at the needle; the current is moving through it, and it is immediately affected by it; but we can change the needle, which has the white end to my finger; again it will be affected, the white end going to the right; the law being the same as with the copper wire, and there being precisely the same kind of action. How strange a thing this is, then, to see that we are getting a kind of magnetic influence actually exerted, and that we are bringing it to act through such bodies as water, and substances which, when in relation to the magnetic force by itself, show no signs of attraction. How we are enlarging the domain of science, when we find that these can be brought out by a kind of magnetic action produced merely by a current of electricity, and that they can be produced in water as well as in metals, provided the current is allowed to go through it!

Now, having obtained these first few facts, let me next carry you to their application in the construction of an instrument which we want very much at present, to illustrate the true condition of this force, and to what extent the power can be traced.

When Oersted had discovered this beautiful fact—for it is but one fact—others applied it in various ways; and first, I must speak of the application made of it by Professor Cumming, of Cambridge, and Professor Sheweigger, of Halle, in the construction of the galvanometer. I think I can make the nature of the instrument, which appears complicated, very plain and simple to you. Suppose I take a long wire, and if we make this our wire, which we can easily apply here, and complete as part of the communication, you will see that a needle is affected by the current going in one direction. I can bend this wire about so as to get a certain result conveniently. The current in one way will carry the white end (north pole) to the right hand. If I carry it in an opposite direction beneath, it will bend the same way. If I put both the currents beneath, and bend them the opposite way, the needle must go in the opposite direction. I turn the wire round—I am going to bring it above—and the white end will pass the same as before. First, the current went above in this direction, and sent the white end this way, and then went below in that direction, and the white end remains as before. It is merely turning the forces round; because they are tied together, so that whether the current goes below or above, if, at the same time, power be imparted, we must get the same effect. If, in place of taking the current here, I make it come in this position, over and then under, at once every part of this double wire will tend to make the needle move the same way, because they are both running to the part below, and have a strong action in turning the white end to the right hand. I am sure you see that if I take this wire round, and carry it over, then this second part is taking the current in the same direction as the first. I am using it to make it go twice over the top and once round the bottom to have a much stronger effect. It is not a portion of the wire here and there, but every part, that has this effect. Therefore, I am not simply making a current go above and return below; I am not only increasing it, but am bringing a great many parts of the current to bear on the needle, and am therefore multiplying the action of this power upon it. I keep therefore to the A B C, because I know that many persons are confused with the idea of going above, and coming back below; but you may see that taking a fixed needle, and sending the current below and above, is as if one wire only went over it as to the kind of effect, but as if a thousand went over it as to the amount.

I must point out another thing. You have seen what we call a magnetic needle, and observed how it pointed by virtue of the earth's power. Here are two magnetic needles; both, of course, have the same power of pointing. I have hung them very hastily, but sufficiently for my purpose. If one needle will point, another will point; and if both are placed on the same stem, in the same position, they point, as you see, with great power. They swing with great freedom half way round, and tend to come to a stable or a natural position. If I put a wire carrying a current between the needles it is manifest they would not move: for this reason—the wire is above one and below the other, and therefore would have contrary effects: it would tend to send one one way, and the other the other, and they would not move; but see how we can change this system. At present it vibrates by the earth's power, because the north poles are together; but suppose I turn it round, and put the north and south poles together. If the two needles are south it will go swinging by accident; it is a matter of chance where it may stand, because they are opposed as regards the direction of the earth, and are indifferent where they will go. If one is a little stronger than the other it will swing back to a state of rest; but, on the other hand, a needle so prepared (astatic) being removed from the earth's power, it is more sensible to the effect of the electric current. If I put a wire now between them—there being two opposite poles together—it will swing round powerfully; and because the earth has little or no power over it, it will stand almost at right angles to the wire, which is the natural condition of the magnetic needle when left to itself. I am not touching it at all. How beautifully, therefore, do we get the earth's power removed from the needles, by putting two in opposite directions, and how beautifully can we put power in the needle! In the instrument nearest to you, you have a galvanometer of this kind, and here we have a rough one. We have put one magnet only, which points quietly till we send the current through it, and it produces the effect which we have seen in the single wire; but in the other we have two needles, one above and one below, and the forces of the two are both counterbalanced as regards the earth.

I must now show an experiment to prove the delicacy of the instrument, and the assistance which it renders to us when examining into electricity. This is simply, after all, an instrument for connecting the magnetic and electric currents with each other.

Here are two wires, which may be carried away to any substances which are to be examined, and you are to look for the effects of the needle on the coil. As I have already mentioned, the condition of magnetism is disturbed in the room by the numerous magnetic influences around us. What I hope to do is, to put the coil parallel to the needle: first, to show you with what great power we are invested as to the examination of phenomena by the aid of this instrument, and how easily we may detect the kind of power we have. I shall take a piece of zinc and silver, and put them merely on my tongue, and you will see by the motion of the needle in the galvanometer that something happens when the metals are in contact with my tongue. Here is the same kind of divergence taking place as that which occurred in the gold leaves I brought before you. When I bring the silver and the zinc in contact with my tongue, and allow them to touch, the needle always bends one way, according to the law I showed you, and I will just catch it in that position in which I think the contact of my tongue will hold it. You see as long as I hold these metals in my mouth they produce the effect; the needle remains fixed, but when removed it returns. If you put a steel knife and silver fork in your mouth, they will indicate the production of electricity in the same way.

Let us take another experiment. Here is a little boiling milk and a silver spoon, and nothing is more common than bringing these things in contact in the kitchen or the nursery. You are hardly aware when you stir hot milk with a silver spoon in a copper saucepan what an effect you are producing. When you are not stirring there is no current of electricity, when you are stirring there is. You stir, and think nothing of it; but, philosophically speaking, great things are really happening. I have no doubt you will find that we can easily affect the galvanometer by stirring the milk, and show the existence of an electric current. It is the milk doing in a quiescent state what my tongue did. (The needle was immediately diverged.) This will give you a notion of the beauty of the laws of nature, and how often they are unknowingly developed under the most simple conditions. I will not make any further application of this principle. You can touch nothing upon metal, especially copper, without some effect of this kind resulting. There is an influence, and the puzzle is to get rid of it sometimes. I have taken here a copper wire, and put it between the two ends of the conducting power of the apparatus. I take one piece of wire, that you may be sure that this wire is single and uniform. If I clean the surface with a little sand paper, if I make it exactly the same in every part, and equally divide it, so as to take all ordinary precautions to have two things alike, yet they are not exactly alike; and we easily prove it by this beautiful instrument. Thus we learn easily to understand things which twenty years ago science could not have advanced. If I put them into a liquid together I get a difference; that needle is telling it by a visible effect. Something like this you saw with regard to the milk; but not equal to it. If I take one piece wetted, and expose it for a short time to the air, it is a new experiment, and attended by increased effects. I dare say I shall now have a good deal of effect; the swinging of the needle takes place, and if I stop till the momentum is over, I shall have still more effect. You cannot conceive the diversity of phenomena which may thus be shown to exist between the electric and magnetic forces developed in the manner I have shown you under these arrangements.

Let me take you to a few considerations of this power of a different kind, and which relate to the character it has as respects the polarity of the magnet. I have used the needle as a wheel; I have placed it below or above, and you see the wheel affected at once. But we take the needle, and examine it by a single pole. Strange to say, this effect of the needle—this mutual effect of electricity and magnetism—is not really an attraction. Take the forces as they are simply presented to you, and the influence on the needle is not an attraction. I will balance this needle near the upper part of the wire, and you will find, when we make contact behind, it vibrates a little; but we shall soon see the difference. Look at the effect on the needle when the wire is made electric. It is not attraction. It looks more like the repulsion of the white and black pole, one being drawn one way and one the other, but by breaking contact you see that it is not repulsion. Suppose I put it there perfectly free, and making contact it looks like attraction, not repulsion; when contact is broken it takes its own free condition. If I brought the pole to a certain position I could find a spot intermediate between attraction and repulsion, where it will hang perfectly indifferent, not affected by it. You see the pole tries to swing round the wire without going to the sides of the wire. Let us examine these results. We shall see that the wire tries to go round the pole in a manner the most surprising, when we consider the power and condition of the force; in a manner that we could never imagine. Perhaps I shall best show this by an experiment, in which you will see how these forms are modified in order to obtain mobile conductors. I am taking you to the mobility of forces. This being one of the extremities of the apparatus I can connect it by wire with that mercury cup; and here, being another extremity, I can connect that with another mercury cup. You will find the wire proceeds to this canal of mercury, then it is continued, so that the electricity is free to go through the wooden cup, and thus make the circuit complete. Here is a mobile circuit; in consequence of that I can examine the magnet itself. This wire is a fixture when it is not subject to the influence of the magnetic poles. Here are poles which are fixtures; the magnet has a little motion of its own, but we shall find a motion beyond that. First of all, the wire is easily affected by the magnets when the current is going through it. There is no action of the wire without the magnet. The current will do nothing of itself; it is always the mutual action of magnetism and electricity. It is perfectly still. If I take this pole round the wire, outside it moves one way; if I bring it inside, it moves the other way. So that there is the same beautiful identity, as well as unity of action, in all cases, between the poles and the currents, which you had before in magnetic and electric forces. But if I did not change the pole, but changed the current, then, again, it would reverse it.

Here are one or two pieces of apparatus exhibiting this phenomenon of the rotation of the pole round the wire, and the wire round the pole, in a very fit and apt condition. Here is one in which a wire is put up: it is an imitation of the first experiment I made, and here is a basin of mercury in which the ends of the wire are placed. This is the wire that leads to the basin of mercury; the current goes up this part, descends, and goes out at another point; so that when I make contact and complete it in this way, I can very easily get the motion one way or the other at pleasure. The moment contact is made we have the current, which is the same on both sides. Now contact is made, and you see how the wire begins to revolve round the pole. It is not attraction, it is not repulsion, but an ever-ready action of tangential force, which sets the current moving around the whole of the apparatus. When we make the pole mobile we make it go round the current; if I change this current it goes the other way; and you will find that all this is represented by the model, that in fact when the needle has taken up this position the attempt of the needle is to bend itself round the current to go in another direction. I profess to be no judge of all the curiosities of this kind of action, but a distinguished philosopher has compared it with other natural forces, and said he thought there was nothing so wonderful in all nature as to see this active force going on of a *tangential* kind. You may compare it to the comets going round the sun. But they move in vacuo; this moves in fluid mercury, and overcomes, therefore, a much greater resistance. It is supposed that the motion of comets in their course is even affected by the ethereal medium of space; but this has no stoppage, it goes on for ever, as long as the current is there, and the pole in the centre. The motion of the planets is composed of two powers, the centrifugal and the centripetal. Mr. Barlow has set up a theory in which he refers it all to the existence of a tangential force, which, if there be such a force, is a new thing to our knowledge, but not a new thing to nature. I impress this upon your minds now, because the progress of science is making us a little more aware of the relations of light to electricity. And when we come to touch light, we come to touch a theory in which lateral vibrations are used as being essential for the explanation of the phenomena of polarization. Although I do not like to say much on this point, you will begin to see the relation between one power and another; and here there must be something like a tangential force.

Here is another case, and so strange, that it seems to me a perfect mystery; yet it never fails us. I will go to the phenomena, and point out the strange condition of power which exists in the association of the magnetic and electric forces. I am going to arrange the current and the magnet. Here is the magnet, free to move at the two extremities. I have arranged so as to take the current of the battery up through the magnet. If I make this a part of the connection, there and here, the current will go by, one way or the other, along this line in at the mercury cup, through the magnet, and then out on this side the magnet. Here I am obliged to bring out the current at the equator of the magnet. I must not bring the other, because the two poles in contrary motion would stop one current. These two poles would try to bend round the current; therefore I am about to separate them, and attract the other pole out of the way. When the circuit is complete I hope the magnet will revolve. It does so. In order to make it more visible I will stick this piece of card board on the upper part of the magnet, and it will carry it round with it. On making contact, you see the revolution of the magnet upon its axis. Observe which way it is spinning round, like the hands of a watch, on the table. If I change the current it will go round in the other direction. But where is the power that has effected all this? It is the current that is going up in the magnet that makes it turn round. I will first experiment upon a cylindrical magnet of this sort. It spins round, and one does not know how to look at it. Something drives it round which is not attraction; the moving power is actually within itself: it is just as if a horse were put in a mill, and required to turn it round without putting his feet to the ground, or as if he were put in a box which was made to pass round, and he went round with it, the moving force being in his body. It is not the case of a squirrel in a cage. The marvel is, that the body which moves actually gives off the power to propel itself. If a stone leaves my arm, I destroy so much power in my hand which I give to the stone. If gunpowder casts forth a bullet, it is the force of the gunpowder expended in producing an equal force on another body. But the powers here are all concentrated in a mass; the mass seems to move on its own axis, not by laying hold of any other body, or deriving motion from any other source. It is not the case of the bird which beats the air; nor of the ship that ploughs the ocean; it is not a force derived from without, but it is entirely within itself. There are two powers which act on each other, and I really know nothing so strange and incomprehensible in nature as this fact; because the thing that drives the body round is going round with it. As the body moves the current moves with it, and other things go in the same direction. We have no analogy to it in any other part of science. At present this is to me and some others a kind of door, a little opening through which I trust we shall by and by penetrate into a new branch of science far more vast than any yet made known to us. It seems a point at which the powers of nature as they exist in magnetism and electricity lay closely hold of each other. I shall point out at the next lecture that these powers are nearly one; at least, that we can convert the one into the other at pleasure, and though we never get electricity so powerfully developed as by the aid of magnetism, yet we do not know precisely in what way they are allied to each other.

A COURSE OF LECTURES

ON

MEDICAL JURISPRUDENCE,

Delivered at Guy's Hospital,

By Alfred S. Taylor, F.R.S.

Lecture VII.

On the determination of the period of death after the access of putrefaction,—unsatisfactory results of observations yet made,—on the period of death in drowned subjects,—inferences from the progressive changes produced by the immersion of the body in water,—singular case involving a question of death by drowning within a certain period,—cross-examination of medical witnesses,—on the earliest period at which adipocere may be produced in the drowned.—Identity of mutilated bodies.—The exhumation of skeletons,—evidence of the cause of death after eleven years' interment,—case of Eugene Aram,—circumstances which require notice on the disinterment of bones,—inquest in a case of mistaken sex in a skeleton.

In the last lecture we considered those facts which enabled us to give an approximate opinion of the period at which a person died when the body was seen before the commencement of putrefaction. On the present occasion we will proceed to examine those data from which we may be expected to pronounce an opinion of the probable period of death after the access of putrefaction.

In endeavouring to determine the probable period of death *after* the occurrence of putrefaction, we encounter even greater difficulties than in the cases which we have lately examined. The reason for this is evident. There are, as we have stated, many circumstances of a primary and secondary character, which so materially modify the progress of decomposition in a dead body, that it is scarcely possible to apply the changes observed to the solution of this question. Orfila, after devoting many years to the examination of the subject, and after the comparative examination of hundreds of exhumed bodies of all ages and of both sexes, has come to the conclusion that it is beyond all human power to establish even approximate results, *i. e.* to attempt to determine the period of death from the progress of putrefaction. Subjects buried for an equal length of time, under the same circumstances, and in the same soil, presented often such differences as to baffle all attempts at generalization. Nevertheless, in the midst of this difficulty, there are fixed points, here and there, which may serve as data for guidance; and very often we are able to give a strong negative, when incapable of offering an affirmative opinion.

Determination of the period of death in drowned subjects.—In a former lecture I adverted to the changes which take place in the body of a person who has died by drowning. M. Devergie thinks that he has obtained a certain series of characters whereby he can determine with sufficient precision the length of time which a dead body may have been in the water, supposing the drowning to have occurred during the winter season. Thus, according to him, in bodies immersed *from three to five days*, we shall find: Cadaverous rigidity; coldness of the surface; no contraction of the muscles under the galvanic stimulus; and a white appearance of the epidermis of the hands. From *four to eight days*—Pliancy of all parts of the body; no muscular contractions under the galvanic stimulus; natural colour of the skin; epidermis of the palms of the hands very white. From *eight to twelve days*—The whole of the body flaccid; the epidermis of the dorsal surface of the hands beginning to whiten; the skin of the face softened and pallid, differing from the skin of the other parts of the body. About *fifteen days*—The face somewhat bloated, and covered with red patches; a greenish tint in the middle of the sternum; the epidermis of the hands and feet perfectly white, and becoming raised in folds. About *a month*—Face of a reddish-brown colour; eyelids and lips green; a reddish-brown patch surrounded by a green border on the fore part of the chest; the epidermis of the hands and feet white, thickened, and corrugated. About *two months*—Face brownish coloured and swollen; the hair becoming loose; the epidermis of the hands and feet in great part detached; the nails still adherent. *Two months and a half*—Epidermis and nails of the fingers detached; epidermis of the feet the same, but the nails still adherent. In the female there is a reddish colour of the subcutaneous cellular tissue in the cervical region, as well as of that which surrounds the trachea and the organs contained in the chest; partial saponification of the cheeks, chin, superficial in the breasts, groins, and fore part of the thighs. *Three months and a half*—Destruction of part of the scalp, eyelids, and nose; partial saponification of the face, of the upper part of the neck, and groins; corrosion and destruction of the integuments in different parts of the body; epidermis of the hands and feet as well as the nails entirely detached. *Four months and a half*—Almost complete saponification of the fatty parts of the face, neck, groins, and fore part of the thighs; the appearance of a calcareous incrustation or deposit on the thighs; incipient saponification of the fore part of the brain; opalescent condition of nearly the whole of the integuments; destruction and removal of the hairy scalp; the bones of the skull laid bare and beginning to become brittle. There are no data to give even approximative opinions for longer periods than this: and it is admitted that even these imperfect data are not available for determining the period of death in subjects drowned during spring and summer.

It is not often that any very precise opinion is required of a medical witness respecting the probable period at which death has taken place from drowning. A question has, however, arisen respecting the period required for the production of *adipocere* in the drowned, and on this has depended an important decision relative to the presumption of survivorship. The property of a gentleman who had committed suicide by drowning, was seized under a commission, and an action was brought to recover it at the Warwick Lent Assizes, 1805, on the ground that the insolvent was dead at the time the commission was issued. The following is an outline of the case:—

The deceased, who was in a state of insolvency, left his home on the 3d of November; and on the 12th of December following, *i. e.* five weeks and four days after his departure, his body was found floating in a river near the place where he resided. A commission of bankruptcy had been taken out against him a few days after he was first missed, and before it was known that he had destroyed himself. It became therefore important to determine whether he had drowned himself (for there was no doubt of his having committed suicide), *before* or *after* the issuing of the commission. If it could be shown that he was drowned when it was issued, the commission would be void in law, and his property could not be seized under it. The litigation then turned upon the question, whether he had drowned himself on the day of leaving his house, or some time afterwards. The body was found floating with the nates on the surface of the water, and the head and feet submerged. On being taken out, the face was covered with a muddy slime. The body was discovered on a Wednesday, and a coroner's inquest was held on the following Saturday. On the Friday, the day before the inquest, three medical men examined the body with a view to ascertain whether any change had taken place in it which might justify an opinion as to the time during which it had been lying in the water. In dissecting the muscles of the lower part of the abdomen, the glutei were found to be converted into a fatty substance, very much resembling suet. The face was completely disfigured by putrefaction. The hair of the head separated from the scalp by a slight pull. The other parts of the body were firm and white, without any putrefactive appearance. The clothes externally seemed unchanged in any way; but the shirt and neckcloth were so rotten as to be torn by the slightest force.

As a selection from the evidence of the witnesses on the trial, we may take the following:—

Mr. Dickenson, who appeared as a witness for the plaintiffs, *i. e.* the relatives of deceased, stated it as his opinion that the body could not have been less than *six weeks* submersed. Three or four weeks would not have sufficed to produce the appearances met with. He thought the adipocerous state of the body could not have been brought about in *less* than six weeks. In cross-examination he admitted that he had met with an instance in which a body had a spermaceti appearance within a shorter time when taken from the Severn, although the change had not advanced so far as in this instance.

Dr. Bree agreed with Mr. Dickenson. The parts of the thigh and abdomen were in the state of soapy fat or adipocere. He should have supposed the body must have been under water for more than six weeks; he therefore thought the deceased must have been in the water during the whole time that he was absent. If it had been exposed to the air it would not have presented the appearances met with. In cross-examination he admitted he had said that the body was in such a state that it would be impossible to pass an opinion.

The next witness on this side of the question was Dr. Gibbes of Bath, who had been for many years engaged in experiments on this subject; and who had published the results of these in the Philosophical Transactions. He stated that he had been able to procure a small quantity of adipocere from muscle, by maceration in water for *a month*; but that in general it required much longer period for this transformation to take place. Upon this evidence, the jury were of opinion, that the deceased was not alive at the time the Commission was taken out; and the bankruptcy was accordingly superseded.

In medicine as in law, there are always two sides to a question; and accordingly there appeared just as many medical witnesses for the defendants, *i. e.* the creditors, as for the plaintiffs. The case, *primâ facie*, as we have seen, bore most strongly in favour of the plaintiffs, *i. e.* that the deceased had been drowned during the whole period of his absence. Nor is it easy to see on what medical grounds the presumption of death for the whole period could be fairly opposed. Nevertheless the questions for the cross-examination of the defendant's witnesses afford rather an instructive illustration of the manner in which adverse medical evidence is dealt with in a court of law; and I here make a selection of a few of these questions from a report of the trial given by Professor Amos.

Whether it was not on the Saturday that they (the witnesses) first saw the body? it having been taken out on the Wednesday. Whether it was not probable that a considerable change had taken place in the body, since it was first taken out of the water; and, therefore, whether they can speak so determinately as though they had seen the body on the first day? Whether they made any incision in the body, and noticed any particular appearances? Whether it was by daylight or candlelight, that they examined the body? Whether they had ever heard that animal muscle was capable of being converted into a substance similar to spermaceti when exposed to running water? From what sources they obtained this information? What length of time is generally thought necessary to produce such an effect? What is the composition of animal muscle? Whether this substance when deprived of the vital principle, and exposed to atmospheric air, is not always readily putrefied; and how soon this effect takes place under common circumstances? What are the effects of putrefaction? What new substances are formed during putrefaction, and how are they formed? Whether there is not a material difference in the decomposition of animal muscle, when exposed to running water, and of that exposed to atmospheric air: and why? What are the component parts of the substance produced from muscle exposed to water? Having thus obtained the composition of animal muscle, and the substance resulting from the decomposition of animal muscle in water;—they may be called upon to state what decompositions and recompositions take place in this process? Whether they have made any experiments upon this subject themselves? If they answer in the affirmative, then let them state the precise circumstances of the experiments. If they have not made any experiments, how comes it that they think themselves authorised in opposing opinions, which are the result of actual experiments made by others? Whether the body exhibited any appearances which might induce them to think it had not been in water the whole of the time insisted upon by the plaintiff?

Further, whether they have ever seen animal matter in a progressive state of conversion from muscle to adipocere? Whether they have ever seen any substance of similar appearance to that produced to them? Whether a substance exhibiting the appearances which the substance in question does, could *not* have been in the water upwards of five weeks? Whether, in short, it is not probable that the substance in question had been in water that length of time?

It would have been quite impossible for any medical evidence, under the circumstances, to have successfully withstood such a cross-examination. The last two questions were so ingeniously constructed, that the answers to them were, as might have been predicted, fatal to the case of the parties in whose favour the witness appeared.

Thus, if he admitted that it *was probable* that the substance had been in the water upwards of five weeks, then he corroborated the evidence of plaintiff's witnesses;—*if*, on the other hand, he had said it was *not probable*, he must have stated his reasons; and here he would have wholly failed, because all medical experience would have been entirely opposed to his statement.

There can be no doubt, that the verdict of the jury, in this case, was both legally and physiologically well founded. The general period required for saponification in drowned subjects is stated by most observers to vary from three or four months to a year. Certainly its occurrence in a subject, to any extent, within five weeks and four days, must be regarded as an exception to a very extensive series of observations. The witnesses for the plaintiff were then perfectly justified in assigning the longest possible period, that the circumstantial evidence would admit, for its production in this instance.

The facts of this case show, that adipocere may be very extensively formed in the body of a drowned subject within a period of six weeks. The defendants wanted to make it appear that the adipocerous transformation might take place with much greater rapidity, but there were no facts to render this view probable, while there were many facts in support of the contrary opinion. One instance of its early production is related by Dr. Harlan, of Philadelphia. He had occasion to macerate the cranium of a large fat negro in the summer of 1824; it was placed in a barrel of water, and kept closely covered over. About six weeks afterwards he observed the head floating on the surface, and rather inclined to one side. That portion of the head which floated above the level of the water was tumefied, and on cutting into it the whole substance down to the bone was found converted into adipocere. That portion of the head and face which was immersed in water was in a putrefied state.

It may be as well to compare the facts of this case with the rules laid down by M. Devergie, for determining the period during which bodies have remained in water. The deceased was an adult, and the drowning took place during the winter season;—it is therefore a very favourable case for testing the value of these rules. M. Devergie fixes the earliest period for the production of adipocere at about two months and a half,—he then speaks of its commencing in the cheeks, chin, breast, groin, and fore part of the thighs. Here, however, in less than six weeks, the adipocerous change had taken place completely in the muscles of the lower part of the abdomen and in the glutei. M. Devergie states that the hair of the scalp becomes loose in about two months. Here it separated with the slightest pull in six weeks. The data furnished by this medical jurist would therefore tend to assign a much longer period of submersion than six weeks to a body presenting the characters observed in this case. It is scarcely necessary to remark that rules of this kind can only be regarded as very remote approximations.

Still more recently, another case has occurred, in which Mr. Callaway informs me that he had to give evidence respecting the probable period at which drowning had taken place, from the partial conversion of the body into adipocere.

Identity of mutilated bodies.—A dead body partially putrefied may be found mutilated, and parts of it may be discovered in localities distant from each other. There is less difficulty here in making out identity, than where only bones are discovered; for it is by no means easy to say whether bones belonged to the same skeleton. So long as the soft parts are attached there will be no difficulty in giving an opinion; for those who commit murder, and thus dispose of a body, think that identity must be entirely destroyed if they only deposit the parts of the body in remote places. In this respect, however, they are deceived; for good medical evidence may still be forthcoming. In the case of the woman Brown, murdered by Greenacre in 1837, the head, trunk, and limbs were scattered in widely distant parts of London. The limbs were not found until six weeks after the trunk, and then at a considerable distance and under very different circumstances. In the examination of the trunk, it was observed that the fifth cervical vertebra had been sawn through, leaving only about the tenth of an inch of that bone. When the head was found it was observed that the fifth cervical vertebra had also been sawn through, leaving only the posterior spinous process. On comparing the head with the trunk they fitted exactly, even to the continuation of a superficial cut on the skin. On afterwards comparing the trunk with the legs, it was ascertained that the cut surfaces exactly corresponded. The thigh bones remaining attached to the trunk, had been sawn through about an inch below the trochanters, to about one half their thickness, and then broken off. When the limbs were discovered six weeks afterwards, the portions of thigh-bones exactly corresponded as to the sawing and fractures. Not only were the parts of the body thus proved to belong to one individual, but that individual was further identified by the peculiarity of the absence of a uterus.

In a case of infanticide, which was the subject of a trial in 1839, the arm of a child was found concealed in a dust-hole of the house, while at about the same period the body, without an arm, and the head of a child, were found in a ditch at some distance from the house where the accused party was living. The identity was, however, distinctly made out by the fact, that the arm and scapula attached to it exactly fitted to the trunk, and that the incisions through the muscles and vessels completely corresponded.

On the occasion of a murder perpetrated at Brighton some years ago, a head and subsequently the body of a female were found in different and distant places. They were clearly identified as belonging to the same individual: first, from the fact that there were four cervical vertebræ attached to the trunk and three to the head; and secondly, from the divided vessels and cartilaginous rings of the trachea exactly corresponding. The importance attached to this kind of anatomical evidence shows that when a portion of a dead body is found, the whole of the parts which bound the section should be attentively observed and accurately described.

Exhumation of skeletons.—It occasionally happens that medical investigations are required to be made so long after interment that all the soft parts of the body are destroyed, and nothing but a few bones or the entire skeleton may be discovered. In either case numerous important questions may arise affecting identity as well as the mode of death. Indications of murder or violent death may be obtained long after the entire destruction of the soft parts. Briand s the case of a female whose body was erred in 1833, after eleven years' l. It was believed and alleged that she been murdered, and afterwards buried er murderers. The body was found letely reduced to a skeleton, but never- s the third, fourth, fifth, and sixth al vertebræ were still held together by k coloured mass derived from the nposition of the soft parts of the neck; this mass was still surrounded by al folds of a cord, which had been loyed as the means of strangulation. f was thereby obtained not only of the tration of the crime, but of the length olour of the hair, the state of the teeth, orm and length of the bones; and a ring l on the bones of one finger left no t whatever of the identity of the de- d. In 1829 Guerin was condemned at ssizes at Versailles for the murder of rother. The murder had been perpe- l on the 21st August, 1825, and the bad been buried in the corner of a cellar. The exhumation of the re- s took place three years after interment, it was ascertained by inspection that the ased had been destroyed by blows on cranium with a bruising instrument of surface, and the identity of the deceased clearly made out by the disposition of eeth, the malformation of the vertebral nn, and the curved form of the bones of gs. All these facts were deposed to itnesses.

e case of Eugene Aram, although of date, also furnishes an instance of the ssity for closely examining skeletons e it is suspected that the individuals died from murderous violence. This conspired with another to murder a on named Clark. The deceased sud- y disappeared, and his absence could e accounted for. Thirteen years after disappearance some bones were acci- lly discovered in a cave near the town e he lived. Aram's accomplice was ted on suspicion; and, losing his nce of mind, when charged with the ler, he denied that those were the bones, mentioned the spot where they were d. A skeleton was there found, and traces of a fracture and indentation of emporal bone were plainly perceptible. manner in which the murder was com- d was confessed by an accomplice, and medical evidence corroborated this con- n. Aram, who was a man of some y, argued in his defence, that it was sible to identify a skeleton after the of thirteen years; that the fracture of skull and the piece of bone beaten in- s proved nothing; that it might have long in the cave where it was *found*, h had been a *hermitage, and therefore a* likely place of sepulture; and that the appearance of violence to the skull might have been produced in times of disorder, when, in searching for treasure, the graves and coffins of the dead were violated. He also positively denied the conclusions as to the sex of the skeleton; but this objection was entirely set aside by the medical evidence. In spite of the ingenuity of this defence, the facts were too strong against him; and he was convicted and executed.

Aram's defence throws some light upon the questions of doubt which are apt to arise when evidence is given from the examination of exhumed bones. Thus, for example, we find three points strongly urged, involving the consideration of the time required for the destruction of the skeleton and therefore of its identity; of the form, situation, and appearance of a fracture of a bone, so as to enable a medical witness to determine whether it be of recent or of old standing, and whether it was likely to have been caused by accident previously to or during the exhumation, or had arisen from the direct application of violence to the skull during life. Lastly, a clear determination of the sex from the examination of the bones. This, of course, is material to identity, and therefore one of the first circumstances to which a medical witness should direct his attention.

Mr. Perfect has reported a case which shows the importance of attending to *sex* in exhumed skeletons. Two brothers lived together at a farm in the neighbourhood of London. The youngest of the two was dissolute and irregular in his habits, so that they lived very unhappily together. One winter's night, when the ground was covered with snow, the younger brother absconded from the house by letting himself down from his chamber-window; and when he was missing the ensuing morning, his footsteps were clearly traced in the snow to a considerable distance, but there were no footsteps of any other person. Time passed on, and nothing was ever afterwards heard of the missing brother. The elder brother left the farm, and it passed into the hands of a stranger. During the progress of some alterations in the grounds surrounding the house, a skeleton was dug up. It was immediately conjectured that the one brother had murdered the other; an investigation was called for, and an inquest was held. Mr. Perfect, who was not summoned as a witness, requested permission to examine the bones. Having disposed them in their natural order he found that they represented a person of short stature; and from the obliteration of the sutures of the skull and the worn state of the crowns of the teeth, he inferred that *they must* have belonged to an aged person. On examining the bones of the pelvis, it was very perceptible that they had belonged to a *female*." When this fact was communicated to the jury, the two medical men, who had given their opinions from a hasty examination, were sent for, and one of them immediately corroborated the statement that the skeleton had belonged to a female. The proceedings were of course at an end, and a heavy suspicion, amounting to a charge of fratricide, was thus removed from an innocent man. On further inquiry, it was ascertained that the bones had been removed from an old gravel-pit, where gypsies had been accustomed to assemble, and occasionally bury their dead.

This case shows that some medical knowledge is really necessary to a coroner, in order to prevent himself and a jury from being misled by hastily formed medical opinions.

Original Communications.

COLLECTION OF FACTS ILLUSTRATIVE OF THE MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

[Continued from p. 193.]

CONGENITAL MALFORMATIONS OF THE PULMONARY ARTERY, AND IRREGULARITIES IN ITS FORM AND MODE OF ORIGIN.

As it almost amounts to an invariable rule that each of the severer kinds of congenital malformation of the heart is characterised by more or less departure from the natural condition of the pulmonary artery, a complete description of all the cases where this vessel is found in an abnormal condition must involve an allusion to nearly every one of the congenital malformations to which the cardiac apparatus is liable. I shall therefore endeavour to render this portion of the history as brief as possible consistently with my plan of furnishing reference to all the most remarkable examples of the several kinds of malformation in which the pulmonary artery is especially implicated; merely stating the leading particulars of each instance, and especially selecting those details which afford the amplest data in illustration of the pathology and symptomatology of this interesting class of diseases.

Malformations by defect of the Pulmonary Artery.

Absence and congenital obliteration.

In the vertebrate animals, an aorta is an inseparable and essential constituent of the circulating apparatus*. The absence of a true pulmonary artery, originating by a separate outlet from the heart, is, however, a condition which has been not unfrequently observed. The ascending aorta has been found absent only in acardiac foetuses; where there is a heart there is always a pervious ascending aorta, however narrowed, malformed, or displaced that vessel may be: but imperforation, or entire absence of the ascending pulmonary artery, may coexist with a rather high degree of cardiac development."

A single ventricle giving off a single artery (aorta), which distributes one branch to the lungs.

The condition of the heart in its earliest stage of development here becomes permanent: the organ remains in the form of two simple cavities, undivided by septa, and the pulmonary and systemic vessels are distributed from a common trunk. The most singular instance of this species of malformation is one related by Mr. Wilson†. The child lived 7 days, and had merely slight lividity of the lips on the day of its birth and a short period before its death. It seemed weak and in pain, but otherwise it performed all its functions naturally. Death resulted from inflammation of the heart. The heart was found embedded in a cavity formed on the superior surface of the liver, and consisted of a single auricle, ventricle, and arterial trunk, which latter ascended into the thorax, and soon divided into two large branches, the aorta and the pulmonary artery. The aorta, ascending, formed its arch as usual. The pulmonary artery divided into its two branches. The circumference of the aorta, where it separated from the original trunk, was an inch and a quarter. The circumference of the pulmonary artery was only fifteen-sixteenths of an inch. No bronchial artery was sent to the lungs from the aorta or any of its ramifications. There were no bronchial veins. The lungs were, however, larger in proportion than in other children of the same age‡.

---

* Except, of course, in those rare cases where a head or limb has been alone produced.

† Philosophical Transactions, vol. lxxxviii. p. 346.

‡ Mr. Wilson considered that "the pulmonary arteries and veins, in addition to their usual offices, performed those of the bronchial vessels."

There appears to be a tendency to displacement in cases where the heart is single. Ant. de Pozzi relates (in the Ephemerides Nat. Cur. Ann. 4 and 5, Obs. 40.) the somewhat marvellous case of a man, ætat. 27, who suffered, during four years, from palpitation, which could only be relieved by venesection, and who died in a sudden attack of syncope. The pulsation of the heart was not felt in the usual place, but low down on the left side, near the diaphragm. The heart was found very large, consisting only of one cavity or ventricle, containing sixteen ounces (!) of very dark blood. The whole sub-

A second case has been recorded by Mr. Standert*. This child lived only 10 days; it had cyanosis, but it is stated that the respiration, muscular action, and temperature of the body, were not materially affected. The heart consisted of one auricle, into which the pulmonary veins and the venæ cavæ entered, and which presented the rudiment of a septum, in the form of a muscular band, crossing the ostium venosum; and one ventricle, whence arose the aorta, which sent off a small branch in the situation of the ductus arteriosus. This branch divided into two arteries, which were distributed to the lungs. The pulmonary veins were four in number; but neither the area of these veins, nor that of the vessel which acted as the pulmonary artery, exceeded half the common dimensions. It does not appear very certain that the above case strictly belongs to the class in which I have placed it. It may, not improbably, have been one in which the ascending pulmonary artery had become obliterated, the ductus arteriosus only remaining to perform its functions, in which case the condition of parts, although in appearance almost identical with that observed in Wilson's and Tiedemann's cases, must of course have been, physiologically, altogether different.

It has very rarely happened, in the instances of this kind which have been recorded, that the infants have survived for more than a few days, but I shall hereafter have occasion to quote a case (by Dr. Mauran) in which, although there was merely a single auricle and ventricle, and the pulmonary artery was impervious at its origin, the child lived ten months and a half.

A single ventricle giving off a single artery (aorta), which distributes two branches to the lungs.

A malformation of this kind was observed by Dr. Farre†, in a male infant, which died seventy-nine hours after birth, having suffered for thirty hours from dyspnœa, and some coldness and livor of the surface. The heart was found distended to the utmost with blood: it consisted of an auricle and a ventricle. From the ventricle one artery—the aorta, furnished with semilunar valves—arose; its first two branches were pulmonary, very large, and situated close to each other.*

Otto describes that when there is a single arterial trunk from the heart, the pulmonary branch or branches are usually given off low down. Occasionally, however, higher up in the ascending portion of the aorta, as described by J. F. Meckel (Descriptio Monstrorum Nonnullor, p. 11).

Heart consisting of two auricles and two ventricles, giving off a single artery, which distributes pulmonary branches.

M. F. Tiedemann observed the following singular malformation in the heart of a male child, which died 9 days after its birth. The superior and inferior vena cava, and the coronary vein, opened into the right auricle. From the arterial part of the heart arose a single but very large trunk. After giving off the coronary arteries, there arose from the right side of this great trunk a large artery, which ascending gave off the left and right carotid, and the right subclavian. From the posterior part of the great arterial trunk the left and right pulmonary arteries originated, these were sub-divided and distributed in the usual manner. A little higher up, the main trunk became very much contracted, but immediately afterwards resumed nearly its former calibre, and represented the descending aorta. From the arch of the aorta (beyond the contraction) the left subclavian artery arose. The foramen ovale was pervious. The right auricle communicated with the right ventricle, and the left auricle with the left ventricle. The ventricular septum was perforated at its upper part, so as to allow a communication between these two cavities. The great arterial trunk took its origin chiefly from the right ventricle, but there was a small communication of its orifice with the left ventricle also.

The child [when born] appeared well nourished, but wasted until the time of its death. It took the breast feebly; the warmth of the body was very sensibly less than that of other children of the same age. Its breathing was always short, but there

---

stance of the heart was wasted, the arteries elongated and drawn together, so that the arterial blood (sanguis spirituosus) could not be fully expelled. In the place of the right ventricle the ascending vena cava was found raised into a large tumor (the single auricle).

In a specimen of Ectopia cordis, (preserved in the collection at Guy's Hospital, Prep. 1379^{26},) where the ventricular part of a singularly malformed heart protruded from the central portion of the chest, the ventricle—a large part of which has been sliced off vertically—appears to me to have been single; and an excellent anatomist, who examined the preparation with me, coincides in that opinion. The auricles, which were situated within the thorax, communicate with each other by a very wide aperture. These, however, are not invariably the characters of congenitally displaced hearts, which, in several cases, have been found normally constructed.

* Philos. Trans. vol. xcv. p. 228.

† Pathological Researches, Essay I, on Malformations of the Human Heart, p. 2.

* M. T. Weber (Observatio Anatomico Path. de Corde Univentriculari e quo unius tantum truncus arteriosus surgit. Bonnæ: 1832) describes and figures a similar malformation which he found in the heart of a calf. There were, however, two auricles in this case, and a large common coronary artery was given off from the ascending aorta.

[illegible] Death was preceded by convulsive attacks, and [illegible] of the spinal chord, and congestion of the meningeal [illegible] of the brain.

[illegible] Smith [illegible] stated the [illegible] case, and [illegible] remarks, [illegible] [illegible] septum [illegible] [illegible] cavities of the heart remain single, these [illegible] from an early period of intra-uterine life. Certain [illegible] circulation, owing either to [illegible] of the pulmonary [illegible] mechanical obstruction [illegible] other kind. The figure which accompanies this case in the original paper shows that here the [illegible] of the lungs were considerable, though apparently not fully [illegible] probably the most advanced formation of the septa.

The heart consisting either of a single auricle and ventricle, or of two auricles and one ventricle, the pulmonary artery and aorta arising by separate orifices from the ventricle.

[illegible] the cavities of the heart remaining single [illegible] complete development. The instance already quoted from the Ephemerides belongs to this class. The following is a nearly parallel example:—

In a case published in Hufeland's Journal‡, a man, æt. 24, who from his infancy had been subject to violent beating of the heart, suffered after an attack of pneumonia, from great increase of palpitation and frequent paroxysms of suffocation, in which he found no relief, except by pressing the chest strongly against some resisting body. An incipient hæmorrhoidal discharge seemed, for some time, to mitigate the symptoms, but subsequently the results of thoracic obstruction became aggravated, anasarca and ascites supervened, and death ensued, apparently from suffocation. The cavity of the chest was found to be filled with several pints of bloody serum. The pericardium, to its whole extent, adhered to the heart, the cavities of which were filled with black blood. The *septum ventriculorum* was totally wanting; not the slightest trace of it could be found. The origin of the vessels was natural; the apertures of the veins were [illegible]

slightly enlarged, and the aorta was remarkably flaccid. No mention is made of the existence of cyanosis.

A child, æt. eleven days, died apparently of umbilical phlebitis, in the Foundling Hospital of Paris. The heart was found to consist of a single auricle and ventricle, and the aorta and pulmonary artery were given off from the latter by separate orifices. The child suffered from cough and great dyspnœa, but there was no cyanosis*.

Tiedemann† describes the heart of a boy eleven years of age who had long suffered from cyanosis. This organ was found to consist of two auricles, but only one ventricle, from which the aorta and pulmonary artery sprang.

Chemineau‡ examined the heart of a fœtus consisting of three cavities; the right received the venæ cavæ, the left the pulmonary veins, while from the central, or ventricle, the pulmonary artery and the aorta arose. Other instances of this kind of malformation have also been recorded. I have already referred to the probability that the undeveloped state of the septa in these, as in many other cases of congenital malformation of the heart, depends in a certain degree, either upon the narrowness of the pulmonary branches, or upon the existence of some cause of obstruction either in the lungs or systemic vessels; but, independently of this, more or less imperfection of the ventricular, as well as of the auricular septum is in these cases rendered a consequence of almost absolute necessity during the entire period of intra-uterine life, owing to a defect by which the whole of the above-described malformations appear to be characterised||; *i. e.* the absence of a ductus arteriosus. In either of these kinds of malformation a ductus arteriosus could answer no useful purpose, but in either the closure of the ventricular septum, could it possibly occur, would at once produce a fatal alteration in the course of the circulation. It will be borne in mind that, although a great degree of livor may be present, cyanosis is not an essential or even a usual concomitant of the above kinds of malformation.

In cases of this description, as well as in those of the two classes previously alluded to, the abnormal condition of the heart and arteries is purely one of arrested development. Most of the other forms which I shall have to describe are to be considered either as the results of disease occurring during intra-uterine life, or as mal-confor-

---

* Zeitschrift für Physiologie, B. iv. H. ii.; and *London Med. Gaz. vol. xiv. p. 704.*

† See Cyclop. of Pract. Med. vol. iii. p. 66.

‡ Quoted in the Lancet, 1838-9, p. 137.

* Archives Gén. de Méd. Feb. 1843.

† Zoologie, Part I. p. 177.

‡ Vide Sandifort, Obs. Anatom. Path. T. iii. Cap. p. 38.

§ As quoted in the Cyclop. of Pract. Med.

|| See remarks on Mr. Standert's case.

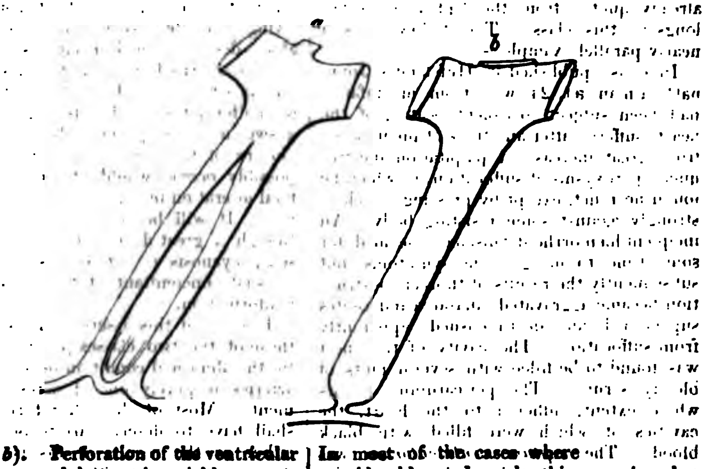
mations, in the strict sense of the term, combined to a greater or less degree with arrest of development. In many of these kinds of malformation the arrangements of parts have been regarded as almost identical with those which naturally exist in the circulating systems of several of the lower animals,—such as the ophidians, fishes, batrachians, birds, and inferior mammalia. In some of the cases, where the fault lies merely in arrest of development, or the malposition or excess of parts, these analogies, to a limited extent, hold good; but most anatomists of the present day will agree with Otto that a large proportion of the comparisons of this kind which have been drawn are fanciful and overstrained.

Obliteration of the ascending pulmonary artery, or congenital occlusion of its orifice.

The cases of this class are, in reality, instances of obliteration of the pulmonary artery, not of absence or non-development of the vessel. Careful examination will generally show that the ascending pulmonary trunk has existed as a separate, if not as a pervious canal—whether in some of the cases it has ever communicated with the ventricle must remain a matter of doubt. Its obliteration usually appears to be attributable to disease occurring at a very early period of intra-uterine life, probably antecedent to the second month, as shown by the imperfect state of the ventricular septum which is observed in a very large proportion of the cases.

The recorded instances of this remarkable species of congenital lesion are rather numerous; and I have myself had opportunities, within the last two years, of examining three recent specimens of this kind, exclusively of several well-marked examples which are to be found in the various pathological collections of this metropolis. Five cases were quoted by M. Gintrac, and many others have been subsequently observed. I find twenty-one cases of this description on record, exclusively of the three which I have recently seen.

The pulmonary artery has been found obliterated in several ways. There may be discovered merely an indistinct band of condensed cellular tissue, or a thin impervious cord extending upwards in the usual course of the vessel, and attached to a small transverse arterial canal which sends branches to either lung; or a strong firm membrane may be observed, stretched completely across the lower part of a narrow channel (the rudiment of a pulmonary artery) extending from the base of the right ventricle, and communicating with a branch from the aorta. The upper surface of this membrane may present some slight traces of a valvular structure (Fig. *a*), and it is sometimes dilated into a little shallow pouch which projects downwards into the ventricle. Occasionally the orifice appears suddenly constricted, as if a thread had been drawn tightly around it (as represented in the diagram, fig. *b*).



Perforation of the ventricular septum is a usual, but not invariable, accompaniment of congenital obliteration of the pulmonary orifice. Wherever life has been prolonged beyond a few weeks the ventricles have communicated. The ductus arteriosus is generally, but not always, pervious. The ovalian canal may or may not remain patent. In most of the cases where [illegible] considerably prolonged; this opening has been found either completely obliterated or greatly contracted.

—In the whole of these cases the lungs receive blood either directly or indirectly from the aorta, or from arteries distributed by its primary branches. This supply is furnished in several modes, of which the following are the principal:

The orifice of the pulmonary artery obliterated; the arterial duct remaining pervious.

Permanency of the canalis arteriosus is the most frequent as well as the most natural means by which the lungs are supplied with blood in cases where the orifice or ascending trunk of the pulmonary artery is congenitally imperforate. The most remarkable instances of this kind on record are those observed by Dr. W. Hunter, Mr. Hodgson, Mr. Howship, Dr. Mauran, and Dr. Spittal.

In Dr. Hunter's case,* the infant, which was born at the eighth month, had cyanosis, dyspnœa, and violent palpitation of the heart, and died on the 13th day; the commencement of the *pulmonary artery* was converted into a solid substance or cord; but, except at its beginning, it was everywhere pervious, though small, and the *canalis arteriosus* had supplied it with a scanty share of blood. The right ventricle had scarcely any cavity left. The *foramen ovale* was very large.

There are two preparations, in the collection at Guy's Hospital, which bear a strong physiological resemblance to the heart described by Dr. Hunter.

In that marked 1383 (which is the heart of a fœtus or very young infant), the right ventricle is furnished with a diminutive tricuspid valve, but has become almost obliterated by an extraordinary concentric thickening of its walls. The *pulmonary orifice* is obliterated, the *ductus arteriosus* open. The *ventricular septum* is entire. The aorta, which is large, originates from the left ventricle.

The preparation 1382^{64}, is also the heart of a fœtus: its *pulmonary orifice* is closed. The auricles are small, communicating freely with each other. A very small chink, about a line in length, represents the right auriculo-ventricular orifice—below this, and rather to the left, is a little cavity (the right ventricle), furnished with the diminutive rudiment of a tricuspid valve. The right auricle communicates with the left by a large *foramen ovale*, guarded by a remarkably formed sigmoid valve which opens just above the left auriculo-ventricular orifice. The ovalian valve must have permitted a free passage of blood from right to left, but must have been efficient, or nearly so, in the contrary direction. The left ventricle, which is capacious, and communicates freely with the left auricle, is partially separated about its centre—above by a membranous expansion, and below by a network of pectinated bands. A large aorta arises from the back part of the left ventricle. Above the point of obliteration, the pulmonary artery is rather small, but it has evidently received a supply of blood—it is uncertain from what source, as the arch and its vessels have been removed. Just at the point where the pulmonary artery is divided, the orifice of the *ductus arteriosus* is seen apparently partially closed. This heart, notwithstanding its complicated form, is essentially single; and, in this respect, corresponds with those in the two cases already detailed.

It is probable that, in the whole of the above instances, obliteration of the pulmonary orifice occurred at a period of intra-uterine life, when the communication between the ventricles had been entirely or nearly closed by the septum, under which circumstances the right ventricle, destitute of an outlet, and reduced to the condition of an inefficient cul de sac, became contracted and almost impervious. This is the only class of cases with which I am acquainted where—the pulmonary orifice being congenitally imperforate—a free communication between the ventricles does not exist. This condition of heart appears to be incompatible with a prolonged duration of extra-uterine life.

Mr. Hodgson's case was published in the London Medical Review. The heart has also been described by Dr. Farre. The *foramen ovale* was widely open. Some of the fibres were wanting in the ventricular septum, and the lining membrane of the left ventricle had three foramina, giving it a cribriform appearance. In the place of the *pulmonary artery* there was an impervious filament leading to a very large *ductus arteriosus*, which might be traced from the aorta into two pulmonary branches. The trunk was much larger than an ordinary ductus arteriosus, but smaller than a pulmonary artery. The child lived seven days.

Two similar specimens are referred to by Farre, as contained in Mr. Langstaff's museum,—one from a still-born infant, the other from a child who lived 6 months. In this case there was a considerable perforation of the *septum of the ventricles*, but it was nearly closed by the fibres which almost filled up the right ventricle. The same author makes slight allusion to two other specimens.

A remarkable case, showing how completely the development of the ventricular and auricular septa may be prevented, when occlusion of the pulmonary orifice occurs at a very early period of intra-uterine life, is related by Dr. J. Mauran.* A female child, æt 10½ months, of small stature and exceedingly emaciated, suffered from frequent attacks of difficult and almost totally suspended respiration, immediately succeeded by a livid and purple appearance extending over the whole surface. The heart was found to be single, having but one auricle and one ventricle, communicating by a very large and free foramen, guarded by a tricuspid valve. The aorta and pulmonary artery arose from the common ventricle, but the latter vessel was perfectly impervious at its origin. The *ductus arteriosus* occupied nearly the usual position, and was open, and hence the *pulmonary artery* received its supply. The auricle was very large; into its posterior part were inserted the two cavæ and the right pulmonary vein (there were only two), the left having an insertion anteriorly near the origin of the pulmonary artery. The parietes of the ventricle were unusually thick and strong.

---

* Med. Obs. and Inquiries, vol. vi., p. 291.

* Philadelphia Journ. of Med. and Physical Sciences, vol. xiv., p. 253.

Dr. F. Ramsbotham observed a very similar condition of parts in a child 6 months old. The heart was single, consisting of one auricle and one ventricle; it was turned to the right side, and the *ductus arteriosus* seemed to supply the place of the *pulmonary artery*. The pulmonary veins of the left lung terminated in the left subclavian vein—that of the right lung passed through the diaphragm and terminated in the vena portarum. There appeared to be an attempt to form a pulmonary artery and vein*.

The following instances represent the condition of parts which is most frequently observed in cases of this description, viz., the partial division of the heart by an imperfect ventricular septum—the aorta originating either from the right ventricle, or from a point immediately over the septum, mid-way between the two ventricles.

Dr. Farre relates† the case of a female infant, æt. 4 weeks, where the *ventricular septum* was perforated; the aorta arose from both ventricles and was dilated. The *pulmonary artery* was imperforate as far as its bifurcation, and its branches received their blood from the aorta, through the ductus arteriosus. The right auricle and ventricle were larger than the left. The child was cyanosed.

Mr. Howship's case‡ was that of a female child, æt. 5 months, which had suffered from cyanosis and frequent suffocative attacks. The heart was found much larger than ordinary, the right ventricle was strong, the walls of the left wasted, the left auricle exceedingly small, and almost incapable of transmitting blood. Both ventricles communicated with the aorta, which, however, arose from the right. A rudiment of the *pulmonary artery* was with difficulty discovered—it arose in the usual situation of that vessel, but it was impervious, and had no communication with the ventricle. It terminated below, in a small ligamentous cul de sac close upon the membrane lining the cavity of the ventricle. The upper part of the pulmonary artery, which was distributed as usual to the lungs, was freely supplied by a pervious *ductus arteriosus*.

Dr. Spittal* has recorded the case of a female child, born at the full period, which presented nothing anomalous in its external appearance, except that the integuments were observed to be of a bluish-purple colour, especially over the extremities. The colour of the skin varied in intensity, being sometimes darker than at others. The child took its nourishment freely, and, for the first few days of its existence, appeared to be doing well. This state, however, did not continue; the infant began to refuse its food, and became subject to frequent attacks of syncope, in one of which it was reported to have expired, having lived only 23 days. On examination, the heart was found to be nearly of the usual size. The walls of the right ventricle 3-16ths of an inch in thickness, those of the left 1-4th of an inch thick. The cavity of the former was greatly larger than that of the latter. The tricuspid and bicuspid valves were of their natural structure. A slight deficiency existed in the upper part of the *septum of the ventricles*. Immediately above this the aorta arose; it was larger than ordinary as far as the ductus arteriosus, being a quarter of an inch in circumference, but beyond this point the vessel was not examined. The rudiment of the *pulmonary artery* arose from the usual situation at the base of the ventricle close to the aorta, by a very small vessel of the usual structure, but capable of admitting only a very small probe, and quite impervious at its origin. In passing upwards, the vessel became rather abruptly enlarged in breadth, and, immediately beyond the ductus arteriosus, divided into its right and left pulmonary branches. The *ductus arteriosus* was open, and admitted a large probe freely. The auricles were naturally formed. The *foramen ovale* was capable of admitting a goose-quill. It is stated that auscultation revealed nothing unusual in the action of the heart.

Dr. Houston observed a good example of this kind of malformation in a male child which died at the age of 18 months. It was cyanosed from birth, and about the sixth month, when teething began, it had several convulsive struggles, one of which terminated in total insensibility and apparent death; it was recovered, however, by inflation of the lungs, &c. It finally expired in a convulsive struggle. The venæ cavæ and their leading branches were unusually dilated; the heart larger and firmer than natural; the right auricle double the ordinary capacity and thickness; the *foramen ovale* round and wide. The right ventricle was larger than the left. The tricuspid valve was perfect. The ventricle had no communication with the *pulmonary artery*; the passage from it into that vessel was totally blocked up. The left auricle was small and empty; the left ventricle exhibited nothing singular in its size or structure, but communicated with the right by a large round opening in the *ventricular septum*. The aorta at its origin was much dilated; the *ductus arteriosus* was large and pervious, and served as a trunk to the branches of the pulmonary artery. The pulmonary artery, though inconsiderable, was pervious down to its point of attachment at the ventricle.[*]

---

* So stated in the original account; but, as the course of the pulmonary veins is distinctly mentioned, this allusion is obscure: it probably refers to a rudiment of the fourth pulmonary vein, only one being described as passing from the right lung.—Medical and Physical Journ. vol. lxi. p. 548.

† Pathological Researches, p. 27.

‡ Edinburgh Medical and Surgical Journal, vol. ix., p. 399.

* Edinburgh Med. and Surg. Journ. vol. xlix. p. 109.

There are two specimens of this kind of malformation in the Museum of Guy's Hospital.

That numbered 1379, is evidently the heart of a very young infant. The aorta arises from both ventricles. The *pulmonary artery* is quite closed at its origin. This artery communicates above with the aorta by the pervious *canalis arteriosus*. There is an aperture in the upper part of the *ventricular septum*.

The preparation marked 1380^{56} is also from a young infant. A large aorta springs from both ventricles above the wide aperture in the *ventricular septum*. The orifice of the *pulmonary artery* is quite obliterated. There is a small opening in the *auricular septum*. The *arterial duct* is pervious. The right ventricle is not very powerful, but is stronger than the left. The right auricle greatly dilated; the left very small.

Pulmonary artery closed, or obliterated. Lungs supplied by the ductus arteriosus and bronchial arteries, or by enlarged bronchial arteries only.

The following is an excellent example of the latter kind of malformation. In the heart of a girl, ætat. 16 years, presented to the Hunterian Society by Dr. F. Ramsbotham, there was no *pulmonary artery*: its deficiency appeared to be supplied by the *bronchial arteries*; the aorta, springing from a point between the two ventricles, ran on the right side of the trachea. There were two right bronchial arteries, and one left, all enlarged. The girl died of tubercular phthisis. The face had been very livid[*].

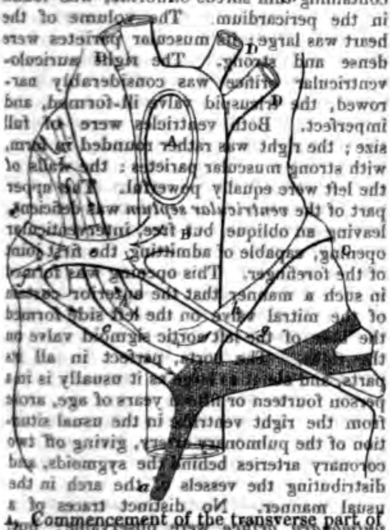
A remarkable case of the former description occurred within my own observation, in a patient of Dr. Babington's, at Guy's Hospital, in October, 1844. The subject of this malformation was an old-fashioned looking boy, ætat. 10 years, born at the full period. His mother stated that she had suffered great mental disturbance during gestation. His intellect was precocious; he was always considerably cyanosed. An intense cardiac bruit was audible between the shoulders. Death resulted from an acute attack of thoracic inflammation. On inspection, some bloody fluid, containing thin shreds of fibrine, was found in the pericardium. The volume of the heart was large; its muscular parietes were dense and strong. The right auriculo-ventricular orifice was considerably narrowed, the tricuspid valve ill-formed, and imperfect. Both ventricles were of full size; the right was rather rounded in form, with strong muscular parietes: the walls of the left were equally powerful. The upper part of the *ventricular septum* was deficient, leaving an oblique, but free, interventicular opening, capable of admitting the first joint of the forefinger. This opening was formed in such a manner that the anterior curtain of the mitral valve on the left side formed the [illegible] of the left aortic sigmoid valve on the right. The aorta, perfect in all its parts, and about as large as it usually is in a person fourteen or fifteen years of age, arose from the right ventricle in the usual situation of the pulmonary artery, giving off two coronary arteries behind the sygmoids, and distributing the vessels of the arch in the usual manner. No distinct traces of a *pulmonary orifice* were observable; but; in the position usually occupied by the ascending pulmonary trunk, my friend Dr. Gull, who examined the parts with great care[†], found a thin impervious cord (*a*) passing upwards to a vascular canal, (*c*, *c*,) transversely placed, which was evidently the upper part of the pulmonary artery, consisting of its right and left branches, passing to the lungs, and a portion of its ascending trunk (*d*), which, however, terminated below in a cul-de-sac. This latter portion of the vessel, as well as the whole of the left branch (*b*), was completely filled with a dense coagulum of some standing. At a short distance below the termination of its arch, the aorta gave off from its under part a large pervious *arterial duct* (*e*), which passed to the right lung, dividing into two branches just before it reached the bronchus; one (perhaps both) of these branches communicated very freely with the branches of the pulmonary artery at (*i*). A very slender and long vessel (*g*), scarcely more than wide enough to admit a bristle, was also distributed from the arterial duct to the left lung. About half an inch below the duct two large vessels (*hh*), evidently *bronchial arteries*, greatly developed, passed upwards, one from either side of the aorta to the right and left lung. That on the left side appeared to have become narrowed in the middle; on the right very free communications may be observed between the pulmonary artery and the bronchial, as represented at (*i*).

---

[*] Dublin Hospital Reports, vol. v. p. 231.

[*] Med. and Physical Journal, vol. lxi. p. 548.

[†] And to whose suggestions I am much indebted for several of the details of the diagram.



A. Commencement of the transverse part of the aortic arch, the heart and ascending portion of the arch having been removed.
B. Descending thoracic aorta.
C, C. Lungs.
D, D, D. Vessels of the arch.

The above figure is merely a diagram, and by no means fully represents the extensive communications which existed between the large arterial branches at their entrance to the lungs.

The narrowing of the bronchial artery and of the branch from the duct on the left side must have greatly diminished the supply of blood to the left lung; but, while the left branch of the pulmonary artery remained pervious, that lung must have been freely supplied from the right, as may be at once seen on referring to the diagram.

The mitral valve was in an extremely diseased state; its orifice was somewhat narrowed, and the whole of the chordæ tendineæ of its anterior curtain were ruptured, their extremities being loaded with fibrinous deposits. Both auricles were large. The *foramen ovale* was closed; but, below it, there was a narrow circular opening through which a common director could be passed from either auricle, although it was furnished with a little imperfect valve. The left auricle presented a line of rough, granulated, fibrinous deposit, just above the origin of the posterior mitral curtain; an appearance frequently observed where there is disease of the left auriculo-ventricular orifice. The lungs were large, and extensively emphysematous on the surface; they contained several extensive recent apoplectic effusions. The liver was extremely congested, and bore traces of having suffered engorgement on previous occasions. The spleen was large and fleshy; its tunic very opaque. The kidneys were much congested, and starred with minute spots of ecchymosis, as were also the mucous linings of their pelves.

The heart and aorta are preserved in the museum at Guy's Hospital. The former is numbered 1383^{25}.

It is probable that the life of this child would have been considerably prolonged had not extensive lesion of the mitral valve been superadded to the malformation from which he suffered. The lungs were more freely supplied with blood than is usual in such cases, and that the pulmonary circulation had remained tolerably unimpeded until shortly before the date of the fatal attack is evidenced by the capacity and strength of the left ventricle, which is usually found small and weak in cases where arterial blood is scantily returned from the lungs. An attack of thoracic inflammation, in itself of rather a severe kind, became fatally aggravated by the obstruction offered by the diseased mitral, which also appears to have determined the occurrence of the pulmonary apoplexy and the great engorgement of the abdominal viscera.

The formation of a clot within the left branch of the pulmonary artery most likely tended to hasten the fatal event, the supply of blood to the left lung from the arterial duct and left bronchial artery being extremely scanty. The formation of a coagulum in the artery was in all probability attendant upon the pulmonary apoplexy, which was very extensive in this lung. The cardiac bruit heard between the shoulders was doubtless produced by the mitral lesions.

The pulmonary circulation supplied by supernumerary arteries from the aorta or its branches.

Otto and Andral state that the pulmonary arteries are sometimes given off from the subclavian.*

---

* Otto quotes instances where this was observed in the lower mammalia. Legallois

Although the preparation of the parts which were removed in the following case is imperfect, and it was not positively ascertained in what manner the pulmonary vessels received their supply, I think there are strong grounds for believing that blood was conveyed to these arteries by a branch from one of the large vessels of the arch, and, most probably, from the left subclavian. In May last, Dr. Thomas Chambers presented to the notice of the West London Medical and Surgical Society the heart of a boy between 9 and 10 years of age, who had laboured from his birth under the usual symptoms of morbus cæruleus, had several times suffered from hæmoptysis, and died rather suddenly with symptoms of pulmonary obstruction. Upon examination after death, the lungs were found extremely congested, and nearly airless throughout. The whole of the pericardial surfaces were inseparably united by old adhesions. By the kindness of Dr. Chambers and Mr. Prescott Hewett, I had an opportunity of carefully examining the heart. The right auricle was rather unusually large, the left (which received five pulmonary veins) was singularly small. I could not discover any opening in the *auricular septum*. The right ventricle was remarkably capacious and strong, and communicated with the left (which was unusually small), by an aperture in the *septum* large enough to admit the passage of the little finger. The aorta arose from the right ventricle; it was large and strong, gave off the two coronary arteries in the usual situation, and was complete in all its parts. The *ductus arteriosus* (which was attached to the ascending portion of the aorta about an inch and a half above its origin) was perfectly closed. A small depression was visible at the upper part of the right ventricle, to the left of the aortic orifice;—this hollow was evidently the rudiment of the *ventriculo-pulmonary opening*, but it was completely occluded by a dense membrane of fibrous structure. Immediately above this partition a narrow passage (the ascending portion of the pulmonary artery) extended upwards to the back of the aorta, where it divided into two branches; one of these appears to have passed to the right lung, and the other is again subdivided into two. I believe that the lower of these went to the left lung, and that the upper received blood from some aortic branch. The arterial ligament passed directly from the upper and inferior part of the ascending aorta to the point of divergence of the two main pulmonary branches. In the portion of the aorta which remained, there were not any vessels which could have conveyed blood to this rudimentary pulmonary artery, but this must, in all probability, have been supplied by branches arising either from some of the large vessels of the arch, or from some part of the descending thoracic aorta. That the supply was received from the latter source is rendered extremely improbable by the fact that, immediately distal to the left subclavian artery, the tissues of the aorta were considerably thinner and weaker than they were a short distance above this point, rendering it probable that a somewhat diminished current of blood passed through the descending part of the main artery. Two or three of the orifices of the superior aortic intercostal arteries were left attached to the vessel, (which had been divided obliquely immediately anterior to the origin of the left subclavian): these were of the natural size: hence the further improbability that the pulmonary artery received any supply from the aorta below its arch. The origins of the brachiocephalic and left carotid arteries appeared of the ordinary dimensions, and did not seem to have been capable of admitting more than the usual quantity of blood. The left subclavian had been severed, and therefore it was impossible to judge of either its dimensions or its course, but the obliterated state of the arterial duct, the undilated condition of the brachio-cephalic, left carotid, and intercostal arteries, and the thinness of the coats of the descending aorta, appear to render it a perfectly fair conjecture that the pulmonary artery could not have received its supply of blood from any other source than the left subclavian.

Whatever uncertainty may attach to the manner in which the pulmonary artery was supplied with blood in this remarkable case, its detail affords one or two extremely interesting facts—as shewing for how long a time an individual may survive, although suffering from so extreme a malformation, and as proving that the natural closure both of the arterial duct and the ovalian foramen may be effected, even in a case where there is complete occlusion of the pulmonary ostium. The heart is preserved in the Museum of St. George's Hospital.

The following case, by M. Bigger,* affords a rare example of absence of the pulmonary artery, the lungs being supplied by a supernumerary vessel from the arch of the aorta. An infant which, from the fifth day after birth, had been affected with cyanosis, died at the age of 5½ months, of convulsions and dyspnœa. The left ventricle and auricle of the heart were found to be much smaller than the right. The *foramen*

---

noticed it in a rabbit. Otto also saw, in a *double monster, an artery from the* innominata *trunk pass to an* accessory lung, (Selt. Beob. *Part I. p. 16. I shall* have to allude to other in*stances of this kind.)*

* Wochenschrift für die Gesammte Heilkunde, 1839, No. 36; and Edinburgh Med. and Surgical Journal, vol. lv. p. 25.

ovale was still patent. The pulmonary veins were much contracted, but no traces of the [true?] *pulmonary arteries* could be detected. The aorta arose from the septum of the two ventricles, and communicated with both. A considerable *arterial branch*, about the size of the arteria innominata, was given off from the arch of the aorta, and was distributed to the lungs.

In January 1842, Mr. G. Smith detailed, at the Westminster Medical Society, the case of an infant which attracted attention soon after its birth by the dark colour of its skin. It, however, went on pretty well, and appeared in good health, except that it was subject to attacks of crying, with shortness of breath, at which time the blueness of the surface was very much increased. It died suddenly at the age of eight months. The body was plump and fat. The heart was large, the right auricle and ventricle were of great extent, and composed the greater portion of the organ; the right ventricle was more muscular than natural, and the left had the small proportions proper to the right. The *pulmonary artery* was wanting, with the exception of what appeared to be the small rudiment of one going in a direction towards the ductus arteriosus. The aorta, which was very large, arose from both ventricles, the *ventricular septum* being incomplete. The vessels branched off from the arch of the aorta as usual; but, in addition to these, there was an artery about the size of the subclavian arising from the under surface of the arch. This shortly divided into two branches, which were distributed one to each lung. There were three or four small pulmonary veins, which passed to the left auricle. The foramen ovale was open sufficiently to admit a goose-quill in an oblique direction.*

As the precise spot from which the supernumerary branch arose in the two cases just quoted is not mentioned, and as no reference to the arterial duct is made in either, it would be difficult to judge whether the lungs were, in reality, supplied by an accessory vessel formed especially for that purpose, by an enlarged bronchial artery, or by the ductus arteriosus, which, owing to the complete obliteration of the ascending pulmonary trunk, would have had the appearance of arising as a distinct branch from the aorta. The latter is most probably the true explanation. At all events, these cases bear the closest physiological relation to those which have been previously quoted.

A few other cases of obliteration of the pulmonary orifice have been recorded, but these are rendered imperfect in their details from the circumstance that the precise manner in which the lungs received their supply of blood was not ascertained, the aorta having been cut through a short distance above its origin. I have recently seen an instance of this kind; but, as I understand that the gentleman in whose practice it occurred intends to publish the case, I shall make no further allusion to it at present.

Dr. Shearman, of Rotherham,* details the case of a delicate female child, ætat. 8 years, who suffered from slight cough, hæmoptysis, and some lividity about the mouth and eyes. The chest was well formed, except that the left side was more prominent than the right. "There was a *flat* sound over a much greater extent than natural in the cardiac region; on a level with the superior margin of the third rib on the sternum, a loud bellows sound with the first or systolic beat of the heart, which was heard louder under the right clavicle, and not under the left; another loud rasping bellows sound at the ensiform cartilage, with the first beat, which decreased in intensity as you left that spot; and another systolic bellows sound at the apex, more feeble than the others, which decreased in intensity higher up the ventricle. There was a slightly perceptible purring tremor over the apex, and very great jugular pulsation in the neck." Every three or four weeks she was seized with hæmoptysis to a greater or less extent, accompanied by symptoms of cyanosis; during the intervals she had very little if any cough, but she was not capable of taking any exercise without producing very rapid respiration and a violet colour of the skin, on which occasions the jugular pulsation was very great. She died of hæmoptysis about nineteen months after she was first seen by Dr. Shearman.

Both lungs were found very full of grey tubercle. The heart, with its pericardium attached, weighed ten ounces. The right ventricle was considered by Dr. S. to be on the left side of the heart, and the right side of the heart constituted the apex, instead of the left. The auricle connected with the tricuspid valve was very large, and had two large venous openings; the other, connected with the mitral valve, was very small and thin, and only one very minute orifice† could be found. The *foramen ovale* was open. The ventricles communicated by an aperture in the septum, large enough to admit the little finger, just at the root of the aorta. The *pulmonary artery*, like a very small vein, opened into that ventricle which was divided from the auricle by the tricuspid valve. The semilunar valves of the pulmonary artery were quite rudimentary, and the author appears to think that the lungs did not receive blood by that route. As the upper part of the aorta was not preserved, the precise manner in which the circulation through the lungs was carried on could not be ascertained.

---

* Lancet, Jan. 15th, 1842.

* Provincial Med. and Surg. Journal, July 30th, 1845.

† In a subsequent communication Dr. Shearman mentions "that the very small orifice, like a minute vein, connected with the small auricle, had, he feels convinced, never been used as a *pulmonary* vein."

Lediberder[*] (quoted by Hasse) found the pulmonary artery closed by a transverse membranous expansion without any aperture whatever. I have failed to obtain a sight of the original narrative.

Mr. Fearn[†], of Derby, relates the case of an infant which had been affected from the time of its birth with considerable difficulty of breathing, drowsiness, and lividity of the surface. It died at the end of the 7th week. The aorta was nearly twice its ordinary calibre. The *pulmonary artery* was much smaller than natural; it did not cross the root of the aorta, but ran along its right side, giving off its branches to the lungs in the normal way. It contained some fluid blood, and its communication with the ventricle was cut off by a thin membrane stretching across its commencement. The upper part of the *septum ventriculorum* was deficient. The *foramen ovale* was open, and as large as in the fœtal state. The right auriculo-ventricular opening would scarcely admit the passage of a probe. The left auriculo-ventricular opening was natural. The ductus arteriosus was closed. This interesting case appears to have been in many respects similar to that observed by Dr. Thomas Chambers. Unfortunately no clue is afforded to the precise manner in which the upper part of the pulmonary artery was supplied with blood—whether from dilated bronchial vessels, or supernumerary branches from the arch or elsewhere.

M. Gintrac cites[‡] the instance (observed by M. Lordat) of a child, six weeks old, which, while tranquil, performed its functions naturally, there being merely a bluish appearance of the upper eyelids; but when it cried, or was otherwise excited, the surface of the body became blue. It died in a paroxysm. The heart was small, and nearly of a spherical shape; the walls of the right ventricle were extremely thickened, its cavity was exceedingly small; the size of the right auriculo-ventricular orifice corresponded with that of the ventricle. The auricles were well shaped, and the *foramen ovale* was large. The *pulmonary artery* was very small, and entirely obliterated at its commencement. The manner in which the lungs were supplied does not appear to have been observed. The case was probably, in most respects, similar to that by Dr. Hunter, already quoted.

In the whole of the recorded instances of congenital obliteration of the ascending pulmonary artery, where the symptoms have been described, there were, to a greater or less degree, cyanosis and other signs of pulmonary obstruction. In the three cases which have occurred recently in some measure within my own observation, life was, I believe, more prolonged than in any other recorded instances, with the exception of that by Dr. Ramsbotham. In these three cases there was anatomical evidence of the fact that a considerable quantity of blood circulated through the lungs. In two the left cavities of the heart were equal in capacity to the right. In Dr. Thomas Chambers's case they were much smaller, but not extremely contracted. In nearly all the other examples which I have cited there were evidences of a very greatly impeded pulmonary circulation. This obstruction is evidently due less to the indirectness of the course by which the blood reaches the lungs, than to the unnatural narrowness of the pulmonary vessels, which, although greatly varying in dimensions in different individuals, are very rarely, if ever, equal in capacity to the pulmonary branches of a well-formed organ. In all such cases the occurrence of slight pulmonary disease may at once determine the fatal issue; but it is certain that—other things being equal—the duration of life in this, as in most other forms of congenital heart disease, depends mainly upon the degree of freedom with which the blood gains access to, or returns from, the lungs.

To render this part of the subject complete, it will be necessary to devote a few observations to the

Offices of the Bronchial Arteries in health and disease.

The physiological properties of these vessels are exceedingly curious, and appear, even in the present day, to be in great measure overlooked by anatomical writers. It has generally been considered that the bronchial arteries are merely intended to convey nutrient material to the pulmonary tissues, and to supply the external and internal secreting surfaces, and the glandular apparatus, of the lungs: and, although cases have been alluded to by authors in which these vessels were absent[*], it cannot be questioned that, under ordinary circumstances, their duties may be almost exclusively of this nature. Still, the capillary anastomoses of the pulmonary artery with the bronchials, as described by Ruysch, Petsche, Haller, and Reisseisen, are so free, and the blood contained in the extreme pulmonary branches is so well fitted for all the purposes of nutrition and secretion, that it is difficult to resist the conviction that the true pulmonary vascular system would be alone sufficient to maintain the organic integrity of the parenchyma and other structures of the lungs, and that the bronchial arteries have been superadded for the purpose of performing certain additional and peculiar functions. Indeed, it cannot be questioned that these vessels are designed to fulfil another very curious and perhaps very important office; they appear to be almost equally calculated either to supply the pulmonary artery, where the entrance of blood to that vessel is mechanically impeded, or to afford, to a limited extent, a means of exit to its branches, when the passage of its contents through the veins is rendered difficult by extreme pulmonary or cardiac obstruction[*]; thus affording a physiological parallel to the duties performed by the external epigastric and external thoracic veins, and the internal mammary and epigastric arteries, which, under ordinary circumstances, are merely engaged in conveying blood to and from the integumentary and muscular structures in their vicinity, but which are also subsidiary to the cavæ and the aorta; communicating with the great venous and arterial trunks by free though indirect anastomoses, they are capable of undergoing extraordinary dilatation whenever those important vessels become obstructed, of conveying large quantities of blood in a direction contrary to that of their ordinary current, and, in short, of almost entirely assuming the important functions of the main systemic vessels. Hence we have seen that where the pulmonary artery is congenitally occluded, the bronchials, extremely dilated, may, in great measure, fulfil its office; and, on the other hand, where the aorta is congenitally obliterated at the lower part of its arch, the bronchials, and upper intercostal arteries, into which they frequently open, are found remarkably dilated, having evidently taken an important share in conveying blood to that portion of the aorta which is distal to the stricture. It is, of course, evident that where obstruction of the pulmonary artery or aorta occurs late in life, functions of this kind cannot be fully assumed by the slenderly developed bronchials. Still, it is probable that, even at the adult period, the supplementary action of these arteries is occasionally, and to a limited extent, called into play; and it appears highly probable that, in many cases of great and long-continued pulmonary obstruction, the relief afforded to the over-distended pulmonary artery by its anastomosing vessels is by no means inconsiderable.

---

[*] Bulletin de la Soc. Anat. t. ii. p. 68.

[†] Lancet, Nov. 22, 1834, p. 312.

[‡] Observations et Recherches sur la Cyanose, ou Maladie Bleu, par E. Gintrac, M.D. p. 201.

[*] That the bronchial arteries may be totally absent, and their functions be efficiently supplied by the pulmonary capillaries, is an opinion fully in accordance with my own views; still, in such cases as those related by Wilson and others, where no bronchial arteries can be discovered in their usual situation, it is scarcely admissible to decide that these vessels are certainly wanting. There are so many ways in which the bronchials may be supplied by anastomoses with other branches

With regard to the general pathological relations of the bronchial vessels little is known; and the subject is one which promises to afford an interesting field for diligent inquiry, especially as regards the conditions of these vessels in various forms of pulmonary and cardiac diseases.

It has been argued that hypertrophy of the left ventricle occasionally produces pulmonary apoplexy by the violence with which the blood is impelled through the bronchial arteries; but this appears to be physically impossible; and, in such cases, the rupture of the vessels within the lung is probably due to very different causes. I have, however, occasionally been inclined to attribute the determination of pulmonary congestion, apoplexy, and œdema, to an obstructed condition of the bronchial orifices consequent upon a diseased state of the internal tissues of the aorta. The smallness of the vessels, however, renders it difficult to bring this to absolute proof without injecting the parts *in situ*, which can rarely be done. Still I think that this suggestion deserves investigation, as it is evident that any cause which tends to promote congestion or inflammation of the lungs must be greatly aggravated where the vessels which anastomose with the pulmonary arteries and veins are in an obstructed condition[*].

---

in their vicinity; and, as will be presently shewn, so many modes in which additional vessels may be given off to compensate for defect either in the bronchial or pulmonary system, that it is almost impossible to prove the total absence of the latter vessels in any given case, unless the whole of the arteries of the chest, neck, and abdomen, have been minutely examined. Several instances of abnormal distribution of the bronchials have been recorded. Christopher Fichel (Haller, Disputat. Anatom. vol. iii. p. 6) saw a common bronchial artery given off from the subclavian distal to the origin of the mammary; and Ruysch states that he very frequently met with this arrangement. The latter authority also describes that the termination of the upper intercostal artery may pass to the lungs. Cruveilhier has seen a bronchial artery given off by the inferior thyroid, and various other arrangements of these vessels have been observed.

[*] Reisseisen always found that injection was conveyed from the pulmonary artery into the bronchials with greater facility than from the bronchials into the pulmonary artery. He also observed that by far the greater number of bronchial arteries end in the pulmonary veins.

[*] In cases of pulmonary congestion, where the aortic orifices of the bronchial and upper intercostal arteries were almost obliterated by thickening, &c., I have found the trunks of those arteries externally to the aorta unusually wide: but this is an uncertain condition, as it may probably depend upon delay to the passage of the blood through these vessels consequent upon diminished cardiac impulse.

In the following case, which I saw in June last, it appeared probable that the great extent of the pulmonary inflammation, and the rapidity with which it involved the whole of both lungs, was to a certain, though probably to a minor, degree, owing to the lesion in question.

A man between 30, and 40 years of age, who appeared to have been previously the subject of tubercular deposit in the lungs, died, after a fortnight's illness, of suppurating pneumonia, involving nearly the whole of the pulmonary tissue, and in some parts assuming almost the characters of gangrene. There was an aneurism of the descending arch of the aorta, which had obliterated the left subclavian artery; and, below this, the sub-epithelial tissue of the vessel was greatly thickened, and otherwise diseased. The orifice of the principal bronchial artery was almost obliterated, scarcely admitting a bristle; externally to the aorta, this vessel was unusually wide.

In a case of remarkable obstructive disease of the aortic valves related by M. Fenema, and quoted by Professor Tiedemann, it is mentioned, that "the first intercostal arteries were narrowed and contracted, and then unusually dilated. The patient—a soldier, æt. 43—had suffered from asthma, and symptoms of great oppression in the chest."

Otto mentions that we sometimes find these arteries very much enlarged in persons affected with cyanosis. He has seen this once. Tiedemann* and others have made the same observation. Otto also refers to a case of aneurism of the bronchial artery†—a very rare lesion—but an evidence of the activity of the circulation through those vessels.

[To be continued.]

ADULTERATED MILK SUPPLIED TO HOSPITALS.

It is stated in the *Gazette des Hôpitaux* that the milk supplied to the Parisian hospitals is of the very worst quality. Doctor Nonat, of the Hôpital Cochin, lately observed some symptoms among the patients which he attributed to the use of bad milk. The milk was seized, examined by the authorities, and found to be much adulterated. The contractor protested that it was the best which he could supply at the price, which was about sixty per cent. under that at which good milk was sold. The only punishment to which the authorities could resort was that of ordering, at the expense of the contractor, a sufficient quantity of good milk to supply the place of that which was adulterated!

MEDICAL GAZETTE.

FRIDAY, AUG. 14, 1846.

Although the deaths in the metropolis were higher in the week ending Aug. 1 than in that ending July 25, we still find no evidence of this increased mortality being due to the alleged prevalence of epidemic cholera. On the contrary, the deaths from cholera were actually fewer, while those from diarrhœa were on the increase. Thus, the total deaths from cholera were only 23, of which ten occurred in the infantile period, and thirteen at various ages above fifteen. The deaths from diarrhœa among infants appear to be progressively on the increase, confirming the opinion expressed in our remarks last week, that this is at present the principal disorder which gives rise to the great mortality above the weekly average. We have reason to believe that this disease is equally prevalent, although not so fatal, among young children in the districts immediately surrounding the metropolis. With the exception of deaths from old age, violence, intemperance, &c. the numbers of which must be in great part dependent on accidental circumstances, the deaths from the most important classes of diseases in the Registrar-General's table for the week ending Aug. 1, were above the averages of the season and year. In the third class, comprising diseases of the brain and nervous system, they were very slightly below the averages. In the zymotic class, or that which includes epidemic, endemic, and contagious diseases, the deaths exceeded the averages.

Deaths from Zymotic Diseases.

In the week ending Aug. 1	Average of 5 summers	Average of 5 years
329	201	188.

Thus it is obvious that the deaths

---

[*] Zeitschrift f. Physiol. vol. i. part i. p. 111.

[†] A Leprotus in Comment. Bonon. vol. i. p. 345 and 353.

e causes in the present sum-
more than one-third greater
average of the five preceding
; and in the week referred
orthy of note, that the mean
are was ten degrees above the
temperature of the hottest
f the year !

e 329 deaths, 249 occurred
nfants, or persons under 15
age, and only 80 among per-
re 15. In proceeding with the
we find that out of the 249
54, or considerably more than
were caused by *diarrhœa*.
seases commonly so fatal
hildren—small-pox, measles,
, and hooping-cough—are at
nt time either so mild, or so
valent, that the total deaths
m only amounted to 62! A
this since the weekly deaths
oping-cough alone, exceeded
nber. Diarrhœa, therefore,
regarded as still prevailing
rm of a most fatal epidemic
ildren. If we were to deduct
us deaths caused by this dis-
n the weekly total, the mor-
spite of the increase from
ses, would actually fall below
al, and would be only a little
e summer average! Again, to
w little, comparatively speak-
adult population of the metro-
suffering from diarrhœa and
notwithstanding its alleged
diffusion irrespective of age,
ollowing facts be taken. In
ending Aug. 1, there were

s from Diarrhœa	.	186
" Cholera .	.	23
Total .	.	209

deaths there were

15 years of age .	.	164
15, and under 60 .	.	16
0 . . .	.	29
Total .	.	*209*

s obvious that there were not more than 45 deaths from these two causes taking place at the adult period of life, and of this number 32 were due to diarrhœa, and 13 only to cholera!

Surely the evidence thus derived from this analysis of the officially registered deaths, will suffice to show that there is not the slightest ground for affirming that cholera like that of 1832 is prevailing in the metropolis in an epidemic form. The practical point which concerns members of the profession is, that they should direct the closest attention to the removal of the causes, and to improved methods of treating infantile diarrhœa.

Since the publication of our last number we have had the opportunity of examining some of the facts connected with the deaths from cholera in the metropolis for the week ending July 25th; and here we may remark, that, owing to the public attention having been strongly directed to this subject, we do not believe that a single death from this cause has escaped registration: on the contrary, it is not improbable, for the reason assigned, that the error may be the other way, and that some deaths, really due to diarrhœa, may have been marked down as cholera. One unfortunate circumstance is, that there is no agreement respecting the name of the disease. In the account before us the deaths are entered as being due to cholera, cholera morbus, bilious cholera, English cholera, cholera infantum, malignant cholera, spasmodic cholera, and Asiatic cholera! The three last we take to be synonymous, and as referring to that disease which has been designated by Dr. Copland Pestilential Cholera. Of this we find *four cases* only recorded out of twenty-seven; and these occurred between the ages of 28 and 53. The duration of two only is given; one lasted twenty-four hours*, and the other three days. Several letters have recently appeared in the public journals, in which the writers have shown great anxiety to impress upon the public mind, that they had witnessed in London cases of cholera presenting all the formidable characters of the disease of 1832. Not a ray of hope was held out that we should escape this dreadful scourge. While it was most industriously announced that the deaths were increasing weekly, the real cause of the increase (infantile diarrhœa) was either not sought for or not stated; and the inhabitants of the metropolis were left to draw the melancholy inference that the horrors of 1832 were again to be realised amongst them. We do not doubt that the cases referred to presented many of the symptoms of the disease of 1832, in the fact of their being attended with blueness, collapse, coldness, cramps, and that peculiar discharge from the bowels by which the malignant disease is characterised. Indeed, we are assured upon the best authority, that such symptoms have attended a few of the cholera cases which have lately occurred in the metropolis; but the great questions which concern the public are these:—Has this disease shown any tendency whatever to propagate itself in an epidemic or contagious form? Has it shown any tendency to affect, almost simultaneously or through intercourse, large sections of the adult population, cutting off the lives of adults in a very few hours; and in spite of all treatment destroying rather more than one half of all who were attacked by it? The disease of 1832 attacked 11,020, and killed 5273 in the metropolis alone! The idea of Asiatic cholera is strongly associated in the public mind with the possession of these formidable characters; and when they are absent the cases would be probably regarded only as instances of an aggravated form of disease depending on temporary, and perhaps on local and removeable causes. We can state upon good authority, that the cases of so-called malignant cholera, which have yet occurred in London, have been purely of a sporadic kind;—they have shown no tendency whatever to spread by infection, and have been much more manageable under treatment. There is likewise another source of consolation which should not have been withheld from the knowledge of the public by those who pretend to be purveyors of information on these great sanitary questions; namely, that cases precisely similar to those now brought forward as instances of Asiatic cholera have occurred yearly in London since 1832.* They have hitherto attracted no particular notice, and have given rise to no alarm; but in the present summer they have been brought prominently forward. This, together with the imperfectly explained fact, that the mortality from other causes had raised the weekly deaths above the average, led to a kind of panic in the metropolis, and induced Government to institute a rigid inquiry, the result of which is that there is no reasonable ground for alarm.

---

* *If we are to take twenty-four hours as a sign of remarkable virulence, it may be as well*

It will not, of course, be inferred from these remarks, that we are arguing against the possibility of the reappearance of cholera in the metropolis with all the malignant characters which it possessed in 1832. This would be presumptuous. We know so little of this terrible scourge, that it is impossible to give an opinion, as to when, and under what circumstances, it may or may not appear; but considering the alarm naturally created by any premature announcement of its

---

to state, that among the [illegible] cases of common *cholera, two persons are represented to have died within the same period of time; i. e. twenty-four hours.*

* Dr. Golding Bird has especially called ion to this important fact.

among us, we have thought
to examine closely the *facts*
h the report has arisen. The
his examination is, that the
ot warranted by the facts at
own to us;—the increased
does not proceed so much
as from an entirely diffe-
—the severe cases of cholera
e occurred during the pre-
r have perhaps been more
but are similar in their symp-
progress to those which have
early since the first invasion
ase in 1831-2; and they have
ed those characters which
he public mind render the
cholera formidable.

he above remarks were writ-
e examined the Registrar-
Return for the week ending
. We regret to find that
is still on the increase, the
ng 195, of which 171 took
o the infantile age! The
cholera have also increased,
of which number 21 occurred
lt age. The total deaths are
the number registered the
week; but the excess is not
e to the increase of zymotic
or the deaths from this class
16 above the number regis-
week, and the increased mor-
partly to be ascribed to the
valence of diseases in the
ird, fifth, and sixth classes of

Reviews.

*anual for Students preparing
xamination at Apothecaries'
r other Medical Institutions.*
Edition, much improved and
d to the Present Time. 12mo.
Renshaw, London, 1846.

undisputed fact, that the sys-
grinding" has exercised an
and powerful influence in
the social and moral con-
the profession. It is almost
o to attach sufficient repro-
a means by which illiterate
who have been either unable
ng to devote their attention
actical study of the medical
, enabled to pass with
credit the examinations prescribed by the licensing bodies; and are thus permitted to occupy a station in society to which neither their education nor their address entitles them, and to practise legalized homicide upon hosts of unfortunates who apply to them for relief under a false impression that every man who bears the name of physician or surgeon has necessarily received a proper course of medical instruction. Still, it is evident that there must be something remarkably clever in a process of teaching by which the reckless and indolent student, whose allotted three years of hospital study have been permitted to pass on almost wholly unimproved, and who does not possess the slightest practical acquaintance with disease, is enabled, after studying under a grinder for from three to six months, to acquit himself at the Hall or College with as much, nay, perhaps with more credit, than can the laborious and honourable man who has for years devoted the best powers of an ardent and observant mind to the unaided acquisition of professional knowledge. The fact is, that the system of colloquial and categorical teaching adopted by the grinders is in itself admirably calculated to convey useful information in its most available form, and to impress the knowledge thus imparted strongly on the mind. Apart from its trickery, the system of grinding is excellent, and wherever efforts are made to attack and suppress it they must be directed with a view to the unprincipled *motive* for which it is often (though by no means always) had recourse to, rather than to the *manner* in which the teaching is usually conducted.

Having stated these sentiments, we have no hesitation in according very high praise to the work before us. The facts which it conveys are well chosen, stripped from all unnecessary and extraneous details, and conveyed in a clear and accurate manner. The book contains a very large mass of useful and necessary information; and, although of no use whatever to men who have not previously studied the elements of chemistry, anatomy, and medicine in the proper manner, it is calculated to prove of great value to students preparing for examination who require to be reminded of, rather than to be taught, the leading principles of those sciences.

Medical Trials and Inquests.

THE ALLEGED DEATH FROM MILITARY FLOGGING AT HOUNSLOW.

IN giving an abstract of this case, which has recently excited so strong an interest in the minds both of the public and the profession, we shall merely detail those portions of the inquiry which distinctly bear upon the medical history of the occurrence, as questions with reference to the legal and moral bearings of the case cannot be appropriately discussed in our pages.

On Tuesday, July 20th, 1846, an inquest was held[*] at Hounslow before Mr. Wakley, M.P., Coroner, to inquire into the circumstances attending the death of Frederick John White, aged 27, a private in the 7th Royal Hussars, who was flogged on the 15th of June last, and died in the hospital of Hounslow Barracks on Saturday the 11th of July.

The Coroner desired that no witness but Mr. H. G. Day, the surgeon appointed by the jury to inspect the body, should remain in the room while the other witnesses were examined.

The following witnesses were then examined:—

Henry Potter, examined.—I am hospital sergeant in the 7th Royal Hussars. The deceased died on the evening of Saturday the 11th instant (July), in my presence and that of Dr. Warren. Deceased had, at the time of his death, kept his bed again for four or five days. He was Dr. Warren's patient. Deceased was punished on the 15th of June last, and I received him into the hospital directly after he had received his punishment. Deceased walked into the hospital of himself. Fomentations were first applied to his back, and afterwards dressings. He kept his bed for the first fourteen days; the skin healed readily. About ten days after he had left his bed his skin had all healed, and he would have left the hospital the next day, had he not complained of a pain in his left side. That pain afterwards left his side, and flew to his bowels. He again kept his bed for four or five days. On the Saturday of his death deceased was seen by Dr. Hall, one of the medical staff in London, by request of Dr. Warren. About three o'clock the same afternoon deceased became insensible, and remained so until he died, about eight o'clock. Deceased was a man given to drink; he had been before punished by extra drills, &c. He was not sober when he committed the offence. He was a man of very sound mind.

It was then proved that the deceased received 150 lashes with the cat on the day of his punishment. The lashes were inflicted by the farriers of the regiment, who were changed at every 25 strokes. Deceased asked for water when the farriers were changed. The surgeon did not ask deceased any questions. The deceased made no appeal to the surgeon while receiving the punishment. Blood appeared between the shoulders before the first 25 lashes were completed. There was a great discharge of blood before the whole was completed. Deceased, when the 100 lashes were completed, said "Lower, lower!" that was the only word he uttered. When the punishment was completed some water was thrown on his shirt, which was thrown over his back; he was then marched to the hospital. The surgeon did not examine the deceased's back after the flogging, or while it was going on.

A comrade of deceased's stated that, generally speaking, deceased was considered of a delicate constitution, particularly in the chest, but he never knew him to be under medical treatment before that. He had been in the hospital, but not under [illegible] notice. Considered that the flogging took about half an hour.

A private soldier who was in the hospital as a patient when the deceased was brought in, stated that "he had never seen a man in that state." (This man afterwards mentioned that he had only seen one flogged before; he had 150 lashes.) His back from the nape of his neck to the bottom of the back was wounded. Witness and an orderly of the hospital laid him on his face, and sponged the blood from off his back. The blood was still flowing slightly. The back was fomented during the day with rags in water. Between the blade bones and the shoulders was the worst part. The skin was broken; witness could not compare it to any thing else but like a person who had been cut to pieces. It was a most severe flogging.[*] The surgeon was not there for an hour and a half afterwards. Potter (the hospital sergeant) acted till Dr. Warren came. He (Dr. W.) did not examine the back, or take the clothes off deceased's back. Neither of them spoke to the deceased. Could not form an opinion as to the extent of the wound; should say about four or five inches in breadth, and about six inches long. The surgeon did not see the deceased again until the next morning about ten o'clock.

---

[*] A previous enquiry had been held, but no facts of any consequence were then elicited beyond those which were stated in the subsequent *examinations.*

[*] This portion of the evidence appears to have been considered of great weight by the jury, but most of our readers who are accustomed to listen to the exaggerated statements of non-professional persons respecting the extent of wounds, the amount of hæmorrhages, &c. will give a somewhat qualified credence to this statement.

ot consider it necessary to quote ny details entered into by the hospital and other witnesses respecting ne in which deceased's back was her; it is sufficient to state that the eated, but at the end of about a the back was nearly healed. About he sixth day the deceased got up, nd in the fields opposite the barks he appeared very cheerful, and [illegible] after being flogged!" [illegible] after the punishment his [illegible] over, but [illegible] in-[illegible] half a hand's breadth on each blade. There was a separate patch [illegible]. Deceased went on for [illegible] weeks, and then he complained [illegible] of a singular pain in his left [illegible] which shot through his back. [illegible] said that might go away in a day [illegible] appeared to pay no attention to [illegible] complained of his heart beat-tly, and said it was singular his [illegible] beat when the doctor came. was well enough to go out, when [illegible] upon his back. Deceased was [illegible] when he complained of his [illegible]. First complained of his legs [illegible] before his death. Deceased [illegible] into the opposite ward on the d died next day. He had lost the limbs at that time.

[illegible] is an extract from the evi-r soldier who occupied the room [illegible] deceased died. "He said that Dr. ppeared to be afraid of him [that s condition] now, and told him gging was the occasion of his ill-[illegible] comrade, who was also [illegible] the conversation, however, stated [illegible] as follows:—"Deceased making a remark, that he was doctor thought that the lash was of his illness; he did not say that r told him so, but that it was his ght. He did not say that the doc-poken to him about it." A third eclared that he heard the deceased r Warren:—"This is through the has caused my illness." The doc-answer, "I know it is," three de-. The Coroner, considering that evidence which had been given re-the state of deceased's limbs, it proper to examine the spine, ad-the inquiry; and ordered that the uld be exhumed for the purpose of amination being made by Mr. Day, y an eminent anatomist from town, me did not then transpire.

27th the inquiry was resumed.

Warren, having first been in-y the coroner that he was not answer any question, *but that voluntary explanation he desired* to make would be accepted and taken as evidence, stated that he was surgeon in the 7th Hussars, and had been present when the punishment which was alleged to have caused death was inflicted on White. He examined White most minutely on the morning of his trial, but had not made any entry in the medical books of the circumstance. The examination was expressly to ascertain if the accused was in such a state of health as to undergo corporal punishment. He forwarded to the Court a certificate that the man was "in a good state of health, fit to undergo imprisonment or corporal punishment." He had not made out the certificate with any reference to the extent or amount of punishment: that was not his business. He next saw White on the morning of the punishment, but he made out no new certificate. He had not interfered at the punishment; he had given no orders; it was not necessary that he should do so. The deceased suffered no convulsions while being flogged. He did not faint, and he never appealed to him. He stood close to the deceased. He asked him no questions, and he never felt his pulse. Saw deceased next morning at 10 o'clock. Made an entry every second or third day respecting the state of his back, and his progress to recovery. For the first two or three days after he came into hospital there was no change made in his diet. On the 20th of June the diet was changed to low diet or half diet, and he continued upon half diet to the 5th instant; the alteration then was to spoon diet, (three pints of tea). The scale of diet is regulated by the medical board. From the 15th to the 22d fomentations were used. On the 22d a cutaneous application, with acetate of lead, was resorted to. On the 28th, boils having appeared, poultices were ordered, and opening medicine was for the first time taken. The back healed rapidly for the first two weeks. At the end of two weeks it was nearly quite well. On the 4th of July the entry in the hospital memorandum book was, "His back is now quite well, and he is fit for duty." On the 6th, deceased made complaints of pains at the heart. There had been no previous complaint of internal pains. He was not examined by the stethoscope. The coroner here read Matthewson's evidence, relative to the conversation which was stated to have taken place between deceased and Dr. Warren, in which Dr. Warren was alleged to have said, in answer to White's remark that "his illness was through the lash," "I know it, I know it."—Dr. Warren—"A falsehood, Sir, a falsehood."

Further portions of Matthewson's evidence were read to Dr. Warren, and that gentleman said that he did not believe that the man had told the truth.

Dr. Hall visited deceased; and the day before he died the deceased was removed to the medical ward. The *post-mortem* examination was made by Dr. Reid, on Monday, the 13th inst. The entry in the book did not particularise the exact mode of the disease of which the deceased died. He was treated for inflammation of the pleura of the heart. Every soldier who dies is examined. Dr. Reid is an assistant staff-surgeon. There were found, on examination, old and strong adhesions on the right side of the heart, and inflammation and recent adhesions on the left side. The pleura pulmonalis and pleura costalis were inflamed; the lungs were not inflamed. The pulmonary artery and the aorta were inflamed for an inch and a half; the pulmonary vein was very slightly inflamed. The liver was much enlarged, but healthy; the kidneys were quite healthy. There was no disease of the bladder, and the stomach and intestines were quite healthy. There were no diseased appearances in the chest. (?). The inflammation extended from the heart to the larger vessels. There was no inflammation of the pericardium. The cause of death was inflammation of the heart and pleura, but it was impossible to say what was the cause of that inflammation. Was not present when the body was re-examined by Mr. Day.

Dr. J. Hale was then called, and being sworn, said—I am a graduate of the University of St. Andrews, and Fellow of the Royal College of Surgeons in London. I am a first-class staff-surgeon in the army, and reside at 45, Duke-street, St. James's: I saw the deceased before his death on an order from Sir J. M'Gregor, and arrived here about 20 minutes after 7 o'clock. I met Dr. Warren in the barrack-square. He had written to the Inspector-General, and we went at once to see the deceased, who was then in a dying state. He expired in my presence at a quarter past 8 o'clock. Dr. Warren told me he had received 150 lashes, and that he was suffering from inflammation of the chest. Treatment was then quite out of the question, the pulse having ceased to beat at the wrist. I took an opportunity of examining the back of the deceased, and I also read Dr. Warren's notes of the case, so as to make a report of the case to Sir J. M'Gregor on my return the same night. On the following Monday I got an order from Sir J. M'Gregor, requesting me to be present at the *post-mortem* examination, and considering the case to be one of interest, I brought Dr. Reid with me. Up to that time I had not heard the probability of an inquest discussed, nor had it occurred to me. Dr. Reid made the dissection for Dr. Warren, and I saw the operation, and took notes of it.

The witness here entered into a detailed account of the appearances which the body presented on the *post-mortem* examination, but as they are very concisely set forth in the following documents afterwards read and put in evidence, we omit this portion of the evidence:—

"London, July 11.

"Sir,—I have the honour to report to you that on the receipt of your order of this afternoon, (dated 5 o'clock,) I proceeded immediately to the Cavalry Barracks at Hounslow, and visited the hospital of the 7th Hussars with Dr. Warren, the surgeon of that corps, for the purpose of seeing Private Frederick White, the subject of his letter to you of this date, whom I found in a dying state, and who expired in my presence at half past 8 o'clock.

"White, it appears, received a corporal punishment of 150 lashes on the 15th of June for military insubordination, which was inflicted in the usual manner in the presence of Dr. Warren, and without any degree of severity calculated to attract more than ordinary attention. His back healed kindly, and nothing occurred to mark his case until the morning of the 6th instant, the day on which he was to have been discharged from the hospital to his duty, when he began to complain of pain in the region of the heart, extending through to the back and shoulder-blade, which increased in severity, notwithstanding the measures adopted by Dr. Warren for its relief, until yesterday morning, when paralysis of the lower extremities and retention of urine were discovered, and he died, as I have stated above, at a quarter past 8 o'clock this morning. It would be difficult to give a correct opinion of the cause of this man's death without a post-mortem examination of the body, and as the circumstances of the case are peculiar and interesting, I suppose a minute one will be made by Dr. Warren, and the result reported for your information.—I have the honour to be, &c.

"JOHN HALE, M.D.
Staff Surgeon, First Class.

"To Sir James M'Gregor, Bart. Director-General
Army Medical Department."

"London, July 12, 1846.

"Sir,—Having, in obedience to your instructions of this date, proceeded to the cavalry barracks at Hounslow for the purpose of being present at the post-mortem examination of private Frederick White, of the 7th Hussars, who died on the evening of the 11th instant, I beg leave to enclose a statement of the morbid appearances that were discovered on a careful examination of his body.—I have the honour to be, &c.

"JOHN HALE, M.D.
Staff Surgeon, First Class.

"To Sir James M'Gregor, Bart. Director-General
Army Medical Department."

"*Post-mortem examination of Private Frederick White, of the 7th Hussars, aged 27, made 42 hours after death, in presence of staff-surgeon Dr. Hale, surgeon Dr. Warren, 7th Hussars, and assistant staff-surgeon Dr. Reid.*

"General appearance.—Body muscular, and not much wasted; marks of venesection at the bend of the right arm; marks of a blister on the epigastrium, and of another on the back below the scapulæ; marks of corporal punishment across the shoulders, particularly over the right scapula, but the punishment does not appear to have been severe, and the part where it was inflicted was quite healed: back discoloured from the gravitation of blood since his decease. Thorax: right side: Old adhesions binding the lung to the ribs and diaphragm throughout its whole extent: left side—inflammation of the pleura with recent adhesions, and effusion of serum, containing shreds of lymph to the extent of 12oz.; lung engorged and infiltrated with serum. Heart: Muscular tissue soft and friable throughout; endocarditis on both sides of the heart, the inflammation extending some distance along the pulmonary artery, and over the valves of the aorta; chordæ tendineæ of the tricuspid valve matted together with fibrine; pericardium healthy, and not containing more than its natural quantity of fluid. Abdomen: Liver enlarged, and extending three inches below the margin of the ribs, but not altered in colour or structure, though there are old traces of inflammation on the peritoneal covering of the right lobe; gall-bladder small, and containing a portion of pale-coloured bile; kidneys, bladder, and spleen healthy; intestines distended with gas, but healthy. Head: Dura mater healthy; pia mater injected, and the tunica arachnoides opaque in several places, similar to what is generally found in confirmed drunkards; lateral ventricles capacious but empty; plexus choroides enlarged, and the veins running along the floors of the ventricles distended; substance of the brain marked with bloody points when cut into, and softened at one point on its under surface. A portion of integument was dissected from off the shoulders and spine, where he had been punished, and all the parts underneath were found perfectly sound and natural. The integument itself, with the exception of some discolouration of the cutis vera, was quite healthy.

"John Hale, M.D.,

"July 13. Staff Surgeon, First Class."

"*Copy of a Certificate which was drawn up and signed by the party present at the post-mortem examination, for the satisfaction of the officer commanding the 7th Hussars.*

"Cavalry Barracks, Hounslow, July 13.

"Having made a careful post-mortem examination of private Frederick White, of the 7th Hussars, we are of opinion that he died from inflammation of the pleura and of the lining membrane of the heart; and we are further of opinion that the cause of death was in no way connected with the corporal punishment he received on the 15th June.

"John Hale, M.D.,
Staff Surgeon, First Class.
"J. L. Warren,
Surgeon, 7th Hussars.
"F. Reid, M.D.,
Assistant Staff Surgeon."

The skin was here produced, and Dr. Hale stated that about half had been removed.—The witness: The missing portion is of the same character as that I have in my hand. The boils were on this portion of skin, which was not broken, at least the cuticle or the true skin was not. The skin was removed, not to conceal anything, but to see the condition of the parts underneath.—On the order of the coroner, who put a question to the witness with the view of ascertaining how far the skin was broken, the following entry by Dr. Warren was read and put in evidence:—

"Patrick Frederick White.—This man has been removed to hospital after having received the punishment of 150 lashes. Skin a good deal lacerated and swollen, and covered with blood." Witness (in continuation): I have seen the history of the case given in the register, and I should ascribe the inflammation to the change of temperature at the time the deceased was recovering. A change of weather, bringing rain and cold winds after great heat, took place in the end of June. A corporal in the regiment also died yesterday from inflammation of the lungs. I do not think that the death of White has any connexion with the punishment he received.—Mr. Wakley.—Dr. Warren denied the existence of pneumonia. The witness.—The room where the post-mortem examination was made is a small one, and as Dr. Warren's sight is not good he might have overlooked the inflammation in the lungs.—The witness expressed some disappointment at not having been allowed to be present at the subsequent examination of the body.

The Coroner.—You must not attribute that proceeding to any want of respect to you, Dr. Warren. The fact was this. Some of the gentlemen of the jury intimated to me the advisability of having the witnesses who were to make the medical examination as unconnected as possible with the barracks or the regiment. The order was therefore issued for Mr. Wilson alone to make the examination, and it was deemed the best course not to allow to be present any of those medical gentlemen who had, in the first instance, examined the body, who had already formed their opinions as to the cause of death, who had made out a certificate for the registrar, and who must, therefore, have prejudged the case. Witness.—I have seen a great number of men punished during my long experience in the army, but I never heard such complaints made before of the consequences produced by flogging. I was struck by what Mathewson said, and having since examined him I found that his chest and lungs were quite healthy. The Coroner here intimated to Dr. Hale that he should not like finally to ask his opinion with respect to the cause of death, until he was in possession of all the facts of the case; that he wished him to have an opportunity of hearing the other medical testimony and the depositions of the witnesses, and that before the inquiry was closed he would again call on him to state his views on the subject.

Dr. Francis Reid was the next witness called and examined.—He said, I reside at 24, Stockbridge Terrace, Pimlico, and I am Staff-Assistant-Surgeon. I am an M.D. of Edinburgh, and Licentiate of the College of Surgeons there. I did not see the deceased during his life, but made the *post-mortem* examination, and have been in the habit of doing so for the last thirteen years. I have heard Dr. Hale's evidence, and agree in it. I look on the endocarditis as the immediate cause of death. The lining membrane of the heart was of a deep red, and this was not from the imbibition of blood, for it was not present; nor was it from decomposition, for the heart was not decomposed. The membrane was thickened by infused fibrine, and soft and slightly adherent. The membrane itself was readily torn from the heart, showing the decreased vital cohesion, and there were polypiform concretions of uncoloured fibrine adherent to and interlacing the fleshy columns and the chordæ tendineæ. That proves the inflammation to be recent. In the left lung there was pneumonia in the first stage, but I do not attach much importance to that. The marks of pleurisy on the right side, and of inflammation in the liver, were of old standing.—The Coroner: Do you consider, Dr. Reid, that the flogging the deceased underwent had anything to do with the state of disease you have described?—Witness: There is nothing more difficult than to say what is the cause of a certain disease, for it generally originates from causes which are indescribable. It is as difficult to say what originated disease in the case of the deceased, as it would be in that of Corporal Barnet, to whose death, yesterday, Dr. Hale alluded. It appears that the man had got *up, and was so far recovered as to be able to do ordinary duty, and I* think it probable that he might have caught cold at that time. But though I cannot say what caused the illness which terminated in White's death, I can say what did not cause it. I think the punishment had nothing to do with the cause of death. This is the first case which has ever occurred among all the men who have been punished at home and abroad, which has had a fatal termination, if it be so.—The Coroner: I am afraid your reading has not been very extensive on the subject Dr. Reid.—Witness: I have heard of Governor Wall's case, in which a man was flogged to death there and then. The piece of skin I find is about one-half thicker than it was, and from that I conjecture that it is about one-half less in superficies. The skin of the back was loaded with blood, and as soon as I put my knife into it it contracted. When I took the piece out a beautiful clear red muscle was presented.—The Coroner informed Dr. Reid, for the reasons he had stated to Dr. Hale, that he would require him again to give his opinion on the cause of death at the close of the inquiry.

Horatio Grosvenor Day, the next witness sworn and examined, said: I am a member of the College of Surgeons of England, and Licentiate of the Apothecaries' Company. I live in Church Street, Isleworth. During his life I did not see the deceased man, but on the Thursday after the death I examined the body in the presence of my partner, at the barracks. I knew nothing of the history of the case previously. I opened the cavities of the chest and abdomen, and found the parts very much decomposed, and, of course, out of their usual position. The heart appeared rather smaller than usual, and of a softened texture. It had been cut open in each direction. I saw nothing decided about the lining of the heart, though it appeared rather inflamed and redder than usual. The lungs appeared gorged, particularly on the left side. There were traces of inflammation on the left pleura, but I cannot speak of adhesions, as they had been torn through. The portion covering the ribs was more inflamed than that covering the lungs. The body was in a very decomposed state, and it was difficult to make observations. The liver looked larger than usual, and I thought rather paler. I have heard all the evidence thus far, and I think the cause of death was pleurisy and pneumonia. I suppose the death was caused by change of temperature and exposure to cold. The Coroner gave to Mr. Day a similar intimation to that which he had given Dr. Hale and Dr. Reid, that he would be again called on to give evidence when all the facts had come out.

Mr. Erasmus Wilson, the next witness called, said—I reside at 55, Charlotte Street, Fitzroy Square, and my profession is that of a surgeon. I am a Fellow of the Royal College of Surgeons, Edinburgh, Consulting Surgeon to the Royal College of Surgeons London," (?) "and Lecturer on Anatomy and Physiology. Some years ago I was Demonstrator in University College." Mr. Wilson then read the following statement of the observations made by him on examining the body of the deceased, and the conclusions which he drew from these observations:—

"On Wednesday, July 22, I made a post-mortem examination of the deceased, my attention being especially directed to the back and spine. On the skin over each shoulder there were marks of lashes, and on the right of the middle line between the shoulders there was a large gap occasioned by the removal of a portion of the skin. A small bottle containing a piece of skin was handed to me by the sergeant of police. I took the skin from the bottle, and found that, though much shrunk by immersion in spirits of wine, while the gap from which it had been removed was stretched to its utmost, yet that it corresponded with the gap, with the exception of the side nearest the middle line, where a part had been cut away and lost. I was informed that the last piece had been cut away in order to make the remainder sufficiently small to enter the bottle. From the position which the last piece occupied, I believe it was more protected from the lashes than the preserved portion, and, therefore, being less interesting, in a medical point of view, had been cut off. On the preserved portion of the skin there had been several marks made by lashes; the marks were red, and, upon cutting into one of them, I found that the redness, which was indicative of inflammation, extended through the entire substance of the skin. On raising the muscles or flesh from off the ribs and spine, I find a part of the deepest line of muscles, viz., that which lay in contact with the bones, in a state of disorganization, and converted into a soft pulp: in medical language, I should call this a pulpy softening of the muscles. The seat of this pulpy softening was the sixth and seventh ribs, near their attachment to the spine, together with their intervening space and the hollow between the sixth and seventh pieces of the spine. The extent of the disorganization was about three inches in length, by about one inch and a half in greatest breadth, and between a quarter and half an inch in thickness. In the space between the ribs the muscles had undergone this pulpy alteration, even so deep as the lining membrane; that portion of the flesh which occupied the groove of the spine, and had undergone a similar disorganization, was one of the little muscles known to medical men under the name of the multifidi spinæ. In addition to softening of this little muscle, it was partly surrounded with blood. It was in a state medically called ecchymosed; the interior of the spine was in a state of extreme decomposition; the tissue between the spinal canal and spinal sheath was filled with a dark-coloured fluid, resulting from decomposition of the sheath: the sheath itself was smooth and polished in its internal surface—a state indicative of health; it was perfectly devoid of nervous substance, which had been converted into fluid by decomposition, and had flowed away. The nerves remained, and presented a healthy appearance, so that, so far as the spine is concerned, I discovered no indication of disease. Two questions naturally arise out of the preceding examination—first, what was the cause of the pulpy softening of the muscles? Secondly, could the state of disorganization, preceding the pulpy softening, influence the disease existing in the chest? The cause of the pulpy softening I believe to have been the excessive contraction of the muscles taking place during the agony of punishment. This excessive contraction would produce laceration, subsequent inflammation of the muscles, and the inflammation instead of being reparative would, in consequence of the depressed state of the powers of the nervous system of the sufferer, be of the disorganizing kind which results in pulpy softening. Had the man lived, the disorganization of the muscles would, in time, have been repaired; as regards the second question, there can be no doubt that, although the common cause of inflammation of the contents of the chest is cold acting in conjunction with physical or moral depression, and might have been the cause in the case of the deceased, yet the presence of a portion of muscle in a state of disorganization and inflammation, in close contact with the lining membrane of the chest, might be adequate to the production of the same effect. Certainly no surgeon would feel comfortable with regard to the state of his patient if he were aware of such dangerous proximity."

Dr. Hale was here recalled, and asked by the Coroner whether he had been informed of the discharge of matter, the offensive smell, and the boils on the back of the deceased.—He stated that he had not heard of any great discharge of matter, or of its offensive smell, but he did not attach much importance to these, and as to the boils they were easily explained by the abrasion of skin caused by the cat, and the habits of the deceased.—The Coroner explained that he had merely put the questions to ascertain how far Dr. Hale had the facts of the case before him.

Mr. Wilson was then re-examined, and said—What I have stated with regard to the disorganization of the muscles is a scientific observation connected with pathology, and one which has never been made before. It was such an appearance as I was far from expecting, and I am not surprised that military medical officers should not be aware of its existence, because I do not think it is stated in any work extant. The place of the change in the muscles corresponding with the side of the chest on which there was inflammation of the lungs, I am since I came here still more convinced that the muscular disorganization in question took a prominent part in causing that inflammation. The pulpy softening was in contact with the bone, and from one inch to an inch and a half from the surface. I am speaking of parts on the opposite side to that where the skin had been removed. It was deeply seated, and caused by a rupture of the muscles from their own spontaneous contraction. There can be no doubt that the disease of the heart and lung, and its lining membrane, were the proximate cause of death.—The Coroner: What effect do you think the corporal punishment has had in causing the disease of which the deceased died?—Witness: I think there can be no doubt the man would have been alive now, had it not been for the corporal punishment he was subjected to. I have just overheard a remark from Mr. Clark to a gentleman behind him (Colonel Whyte), that all the medical gentlemen have given but one opinion on the subject of deceased's death. Now I beg to state that none of the gentlemen knew the whole nature of the case till they heard my evidence. There is another remark which has been made, viz. that if I had been pressed at the time of the examination to give my opinion with respect to the corporal punishment, I should have agreed with those gentlemen that it was not the cause of death. But I saw there what I was not aware of. The change I observed is a serious one, particularly if it results from punishment more than once inflicted.—The Coroner: Did the change resemble in its character that in the muscles of the heart?—Witness: It was a more intense change than that, but it is a very difficult thing to say whether in character they were the same. I have lectured on anatomy for more than 12 years, and have opened between 500 and 1,000 bodies. I have never seen in the muscles of the back any change of the kind.

Dr. Reid here requested leave to put a question to Mr. Wilson, and was desired to do so through Mr. Clarke.—Mr. Clarke accordingly asked, How was it that the injury was confined to one side of the back, when both sides must have been equally convulsed by deceased's struggles? Is it not probable that only one side having been *injured*, a bruise was the cause of the peculiarity noticed?—Witness: There is an assertion there which is not proved. There was no struggling, and the appearance could not have resulted from a bruise, for the muscles were in a protected position. A part of the change was in the groove of the back, which was protected. The man was too tightly fastened down to struggle, but there was involuntary and spasmodic action, and under that the muscles gave way. The whole of the muscles down the back were affected.—Mr. Clarke: It appears that he struggled when he struck the sergeant.—Mr. Wilson: I think the appearance was caused by the anguish of punishment, and not by what has been referred to.—The Coroner, at the close of Mr. Wilson's examination, informed him that as the inquest could not possibly be concluded that day, at their next meeting the depositions would be read over to him and the other medical gentlemen, in order to put him and them in possession of all the facts, and afterwards they would each be asked to give distinct opinions as to the actual cause of the deceased's death.

Dr. Day re-examined.—I quite agree with Mr. Wilson about the change of muscle, but I cannot go so far as to say that it accounts for death. I have never seen the appearance before, but it does not seem to me to have any connection with inflammation in the lining of the chest. I think the cause of the disorganization of the muscles is mere conjecture, and I do not connect it with the stripes from the lash, though it may have been from the struggling during the agony of the punishment. Confinement to the hospital, and the depression of spirits consequent on flogging, may have rendered the deceased more liable to disease.

Dr. Hale and Dr. Reid were here recalled, and stated, that their opinions were not changed by the evidence which they had heard from Mr. Wilson. Mr. Wilson adhered to his view of the case, although, as Dr. Reid had truly said, it was very difficult to point out the causes of the disease. He had no doubt, however, that the moral depression, caused by the punishment, took a very important share in the subsequent disease of the deceased, who, if he had received a double allowance of grog, instead of a flogging, would unquestionably be alive now. It would be wrong to say positively that flogging was the cause of death, because the intermediate cause might have arisen from flogging or cold; but it was quite certain that a man depressed by flogging would be more likely to take cold than if he was in a state of perfect comfort.—The Coroner: If you would agree that the flogging had nothing to do with the death of the deceased, there would be an end of the inquest, and we need not meet again; but if you can't do so, it will be necessary, by reading over the depositions, to try and get from you as distinct an answer as possible as to the cause of death. If the jury cannot get that, the whole will result into a case in which they must rely on their own common sense in arriving at a verdict.

The inquest was then adjourned until August 3d. On that day, after the depositions of the medical officers had been read to them, Mr. Day made a complaint that Mr. Wilson had, in addition to the statements they had agreed on making at the post-mortem examination, given in evidence opinions which he (Mr. Day) had not acceded to, and from which he dissented. He did not consider that inflammation of the pleura could be caused by the muscular disorganization observed, for that was covered by the intercostal muscles.—The Coroner: But is it not a fact, Mr. Day, that a formation of mattery substance connected with the veins of the skin is often the cause of inflammation of the lungs?—Mr. Day: Yes, it is so; but I do not think that in the case of the deceased the muscular disorganization was the cause of death.—When the reading of the depositions was concluded, the medical gentlemen were ordered to leave the room, and each was summoned in separately in the order in which he had given his evidence, to say what, in his opinion, after having heard all the evidence in the case, had been the cause of deceased's death.

Dr. Warren, the first in order who entered the room, repeated his former statement, that White had died of inflammation of the pleura and heart, with its connecting vessels, and that the flogging had in no way caused his death. The deceased was not depressed in spirits, for had he been so, he, Dr. Warren, who visited the hospital twice every day, must have noticed the fact.—The Coroner: Is it your belief that if he had not been flogged, he would have been alive now?—Dr. Warren: That is a question which no human being can answer; and the man who ventures to do so puts a great deal at stake.—The Coroner: You cannot fail to bear in mind that on you devolved the duty of examining the deceased on the day he was tried, and again on that of his punishment. The jury will therefore infer that you satisfied yourself he was a sound man.—Dr. Warren: I find, that in the admission and discharge-book, he has been only three times in hospital for six years. Had I found him faint during the flogging, I would have ordered him to be taken down. I admit that an intermitting pulse shews a greater state of danger than even fainting; but I have no instructions on such occasions as to how I am to discharge my duty. (A pause here followed, after which Dr. Warren, with a degree of feeling which excited marks of applause in court, said)—I beg to say, that it is to me a most painful duty to witness such an operation, and I should be most happy to think that I should never be called upon again to witness so disgusting a scene.

Dr. Hall, the next medical gentleman admitted, said,—after hearing the evidence, I am still of opinion that the deceased died from inflammation of the heart, lungs, and pleura; and notwithstanding the evidence of Matthewson and Reilly, I cannot connect the disease with the punishment, or subscribe to the novel doctrine of Mr. Wilson. He does not ascribe this changed condition of the deep-seated muscles to the direct violence of the lash, as they were protected from that by their position, and by the superjacent parts, but to excessive contraction during the agony of punishment, and subsequent disorganising inflammation from nervous depression. Now, White was in the prime of life, and does not appear, by the statements we have just heard read, to have suffered much from nervous depression. It is strange, therefore, and unaccountable to me, why nature should have made no efforts to repair this injury, or that her efforts should have been of a disorganizing kind in this particular spot, while the process of healthy reparation was proceeding rapidly in other parts of his frame. The injury itself, too, is one of a novel kind, and difficult to reconcile to our preconceived opinions of the limited power and action of the small muscles alluded to. White, the witnesses all say, bore his punishment without any struggling; and Dr. Warren says he observed no spasmodic action of the muscles of the spine. Besides, had Mr. Wilson ever witnessed the infliction of corporal punishment, he would have seen that it is the superficial layers of muscles which attach the shoulder-blades to the spine that are thrown into action; and had any rupture of muscular fibre taken place from violent contraction, it would most likely have occurred amongst those, and not among the deeper-seated ones along the spine, which have such limited contractile power, and are so well protected from injury. Mr. Wilson lays much stress on the injurious effects likely to have been produced by this altered portion of muscular fibre lying in contact with the intercostal spaces; but it seems to have escaped his recollection that the cavity of the chest on that side was filled with diseased and disorganized viscera, and highly putrid fluids, which were much more likely to have contaminated the adjacent muscles, than that the small portion of pulpy fibre should have occasioned the extensive disease that was discovered within the chest. The only wonder is, after eleven days' exposure of the body, at this hot season of the year, that the change of structure was not still more extensive. Mr.

Wilson states that he has dissected from 500 to 1000 bodies in the course of his professional researches. I have also served much in warm climates, where deaths unfortunately are very common, and decomposition of the body after death very rapid; and I should say from Mr. Wilson's description that the change he observed was merely the first stage of putrefaction.—The Coroner: Is it not the limited powers of contraction in the muscles which Mr. Wilson refers to which makes them subject to injury?—Dr. Hall: I should say that the change observed by him was the first stage of putrefaction. I regret that I was excluded from the subsequent post-mortem examination, and I enter my protest against that exclusion.—The Coroner: Will you state what right you had to be present more than any other person?—Dr. Hall: I think it was only fair, from the particular turn which public opinion had taken on the subject, that I should be present.—The Coroner: In point of fact, the irregularities which have preceded have brought us into many difficulties.—Dr. Hall: I don't admit that those proceedings were irregular, because, in point of fact, it was a public examination.—The Coroner: How happens it that you were sent for at all, Dr. Hall? What were the special circumstances which led to that? Do you not believe that it was in consequence of the deceased dying so soon after his being flogged?—Dr. Hall: I was sent to make the post-mortem examination in consequence of the report I had previously made about White to Sir James M'Gregor.—The Coroner: In your report you say it appears White received corporal punishment of 150 lashes. Why did you mention that fact, if you did not connect it with his illness?—Dr. Hall: I was bound to say all I knew, and I considered it important to state that fact.—The Coroner: It would have relieved us of a great deal of difficulty if notice had been given at once to the constable, and an inquest had been constituted on the first post-mortem examination. You have made your report, and sent in your opinion, and now you complain that you were not present at an examination made by a surgeon who came before the court as an unbiassed person. You yourself have in your report connected the flogging with the death of the deceased.—Dr. Hall: The connection exists, but it is not one of cause and effect.—The Coroner: Could you form any idea as to the state of deceased's mind from the post-mortem examination?—Dr. Hall: No, I could not; the appearances of disease in the brain were not sufficiently decided for that; but they looked as if the deceased had had delirium tremens. Dr. Hall concluded by repeating his belief that the death of White was to be accounted *for by the* sudden change of temperature on the 5th and 6th of July, amounting to a difference of more than 20 degrees.—The Coroner drew Dr. Hall's attention more than once to the expression used in his report, that the circumstances of the case were peculiarly interesting.

Dr. Reid and Mr. Day repeated their belief, expressed in evidence on a previous day, that the deceased had died from inflammation of the heart, lungs, and pleura, brought on by atmospheric changes, and having nothing to do with the punishment inflicted on him.—The punishment might have had some effect in producing the disease.—The Coroner here asked Dr. Hall if he considered the letter, dated the 25th of June, written by deceased to his brother, to be the letter of a man in cheerful spirits?—Dr. Hall replied that there appeared only one passage in this letter which could indicate to the contrary, and, in opposition to the conclusion to be drawn from this, he set the statement of all the witnesses, that White had not been, and had not appeared, depressed in spirits.

Mr. Wilson was then called. The Coroner put the question,—After hearing the depositions, what do you consider was the cause of the deceased, White's, death?—No question of it, the flogging, and its consequences upon his health. The inducement to me to form that opinion is, that death from flogging is of no uncommon occurrence. The diseases following upon flogging in general are identical with those which manifested themselves in the case of White. I hold in my hand some abstract cases of flogging, and these will prove that my opinion is confirmed by the greatest men in the country.—Dr. Hall was here addressed by the Coroner, and was asked if he had any opposing authorities to refer to.—He had not. He had seen several hundreds of cases of flogging, and death ensued in one case only out of every thousand.

Mr. Wilson resumed.—Extensive injuries to the skin will produce serious internal irritation. Thus a burn will give rise to fatal disease of the internal organs, viz., stomach and bowels, heart and lungs, liver and kidneys, so that prolonged irritation of the skin in this case was calculated to produce disease. Then there might have been secondary disease, inflammation of the heart and lungs, weeks after the application of the cause of the original disease. Such cases are frequently to be met with in our hospitals; so that whether I look at the primary or secondary effects of flogging, I see in both a cause of fatal disease. Heretofore it has been considered that the injuries resulting from flogging are confined to the skin, but I have given evidence that in this case the flogging was followed by a pulpy softening and deranged state of the muscles.—The oroner: You will remember that there was n this case a partial recovery.—Mr. Wilson: t is not an uncommon thing that when, fter flogging, the patient is pronounced to e, and thinks himself to be, out of all danger, ternal inflammation then commences, and hat results in death.—The Coroner: Leavg out of the question mere speculations, is t your decided opinion, from all you have ard of the history of the case, that the ath of White was caused by flogging?—I ave not the slightest doubt that it was.—The Coroner: After deliberating upon all the acts, heard in evidence or observed by yourelf, and deliberating upon them as cautiously s you can, do you entertain a doubt on the ubject? for if you do, it is your bounden uty to state it.—I have not the slightest oubt on the subject.—Some conversation aving ensued between the coroner and Mr. Wilson, touching the contradiction which Mr. Day had offered to the testimony of the latter, the Coroner said, you have opened from 500 to 1,000 bodies, and in cases of these examinations did you find such a state of the muscles as that perceived in the case of White, to result from decomposition?—No, in no one case.

In summing up, the Coroner observed that in this case there had been a deliberate attempt to hold back that investigation due to the law, to the regiment, and to society, and, above all, to the relatives of the deceased. The Coroner then went on to detail the circumstances—the refusal of the Rev. Mr. Trimmer to bury the deceased without the warrant of the Coroner, and the suspicions which were rife in the neighbourhood and in the regiment as to the cause of death—which were the occasion for calling the inquest. When he (the Coroner), on receiving information from Mr. Trimmer, sent the constable to Dr. Warren, and to others connected with the barracks, Dr. Warren stated that White had died of natural disease springing from natural causes, having nothing to do with the flogging; and by others, the number of lashes and the nature of the punishment had been greatly misrepresented. He had no doubt that Dr. Warren believed in the truth of the opinions which he declared; but how he could come to the conclusion announced, after what, according to the evidence, he had stated and admitted to White, when in the hospital, was, it must be owned, a matter of the greatest astonishment. There had been further concealment on the part of the people at the barracks, in applying to the district registrar's office; for, at first, nothing about the flogging was mentioned: and this mystification had proved most unfortunate. If there was nothing wrong there was nothing to fear; if there was anything wrong, investigation would be compelled by the law: and, for this reason, the whole conduct of the military authorities must be characterised as foolish. Upon the first view of the body by the jury, they had noticed that a large piece of skin had been removed from the back; this observation gave rise to various reports most prejudicial to the character of the officers of the regiment, and which, in reality, were not founded in truth. It had since been distinctly proved, that so far from the skin having been removed as it had been said during the life of the man, it was not taken away until after the *post-mortem* examination had been made; and it was then taken away, not for any bad purpose, but to ascertain what was the condition of the back after the individual had died from having received such a punishment. Therefore, had this irregularity of which he had spoken in the preliminary proceeding been avoided—had all been open, fair, and public, no one of these mysterious reports or these suspicious rumours would have gone abroad. Upon their first view of the body, they were informed that an examination of the body had already been made by two staff surgeons acting in conjunction with Dr. Warren; that a report drawn up by them had been made to the Director-General of Medical Hospitals; and so far there had been such an investigation, that a distinct conclusion had been arrived at as to the cause of death. The functions of the Coroner and jury, who ought to have been called in, had been anticipated, and to such an extent had this gone, that while afterwards the Coroner and jury were endeavouring to form some idea as to the cause of death, it was being announced as from authority in the House of Commons, that the circumstances attending the flogging were altogether unequivocal, and that the death of White had no possible connection with the punishment inflicted upon him. These were some of the difficulties which attend on the investigation, and prejudices, too, of a most extraordinary character had been created. Expectations as to the result had been expressed, and the jury, therefore, could not too carefully limit themselves in their inquiry to the legitimate evidence which had been produced before them. The inquest had been called, not because there had been a sudden death, or because there had been a suspicion of poison; the warrant had been demanded on the undisguised suspicion that White had lost his life solely in consequence of the violence of the punishment. The two staff surgeons, having made their examination, and reported their opinions that the death resulted from natural causes, it became necessary for him to intimate to the jury to name their own surgeon to complete what had been only a partial examination. Mr. Day had been named. Mr. Day, however, himself made but a partial examination, and then confirmed the already-expressed opinions. It had been thought necessary by the jury that a gentleman should be called from London, and that the body, now buried some days, should be by him examined. He had not hesitated in looking for the most competent person to fix on—Mr. Erasmus Wilson. It was right he should say that Mr. Wilson was a gentleman of distinguished acquirements in his profession, a first-rate anatomist, and a gentleman with a high character for unimpeachable veracity. The jury, therefore, had to choose their own authority, to select between Mr. Wilson and the three others, also eminent medical gentlemen. The law of the case was this: that the punishment of White was a legal punishment, and if they came to a conclusion that White had died in consequence of the bodily injuries following on that punishment, the verdict which they would return could not inculpate those authorities carrying into execution the legal punishment. The learned Coroner then proceeded to dwell on the fact of the regimental surgeon having pronounced the deceased, on being sentenced, to be in a fit state to undergo corporal punishment, and of the absurdity of any medical man venturing to give such an opinion when the punishment was of that fearful character adopted by the army. He (the Coroner) then, at great length, followed the evidence, medical and non-medical, and which spoke of the demeanour, and of the symptoms when in the hospital and up to the day of his death exhibited by the deceased; and, after pointing out in further detail the exact bearing of the law regulating military tribunals, and the sentences they were competent to pronounce, he concluded by begging of the jury to remember, that if their decision was that death had resulted from this dreadful punishment, they were not called upon to fix any particular stigma to the unfortunate individuals who had taken the authoritative part; they were to leave to public opinion to stigmatize that odious, that monstrous, that abominable law, which gave them the power from the exercise of which such melancholy consequences had resulted. The jury then retired. They deliberated for about half an hour, and returning at the end of that time, the foreman read the following as the unanimous verdict of the jury:—

"The Jury do say, that Frederick John White died on the 11th of July, 1846, from the mortal effects of the severe and cruel flogging which he received on the 15th day of June, in the cavalry Barracks, Hounslow; that the same flogging was inflicted on him under sentence passed by a district court-martial, composed of officers of the regiment of the 7th Hussars, and duly constituted for the trial of the said Frederick John White, &c. And on returning the verdict, the jury cannot refrain from expressing their horror and disgust at any law among the statutes or regulations of this realm which permits the revolting punishment of flogging to be inflicted on British soldiers; and at the same time the jury would call upon every man in this kingdom to join heart and hand in sending petitions to the British Legislature praying for the abolition of every law and regulation which permits the degrading practice of flogging to remain one moment a slur on the humanity and fair name of the people of this country."

REMARKS.—A careful review of the facts of the above case, as stated in the evidence of the medical witnesses, has left in our mind a very strong conviction that White's death was the actual, though remote, consequence of the punishment which he received. We have long had opportunities of observing the immediate and secondary effects of slight and severe wounds and contusions affecting individuals whose constitutions have been depraved by long-continued habits of intemperance or other influences tending to produce impairment of the reparative powers of the system, and have, in common with many other observers, found that every incision, laceration, or contusion, received by a person whose organs of secretion and elimination have become impaired by habitual excess in the use of ardent spirits, places the life of the individual in imminent peril. That such persons do, not unfrequently, escape the menaced danger, and recover without experiencing any very formidable symptoms, and this even where the wound or contusion is in itself of a severe nature, is undeniable; but it is also as certain that such patients are extremely liable, at any period during the interval which elapses between the first infliction of the injury and the complete and permanent reparation of the wounded structures, to be seized with extensive and uncontrollable inflammation of the internal membranes and viscera. Usually these formidable attacks of inflammation occur as the secondary effects of the injury, while the wounded parts are suppurating and still unrepaired; but they may also ensue more remotely, at a period when the process of cure appears to have been rapidly advancing, or even when the work of reparation is nearly accomplished. Upon what precise causes this result actually depends—whether upon purulent absorption, or a vitiated condition of the fluids consequent upon organic or functional disorder of the depurative organs, &c.—we shall not pause to inquire: it is sufficient to say that such a train of consequences is frequently observed, and that wherever a wound of any

tion has been sustained by a person
operate habits and impaired consti-
that individual can never be con-
as secure from attacks of internal
ation, until the local injury has be-
ompletely and permanently repaired,
til the states of irritation and debility
ent to that injury have entirely
ared. In this case, although nearly
eks (26 days) had elapsed between
liction of the punishment and the
on of the fatal attack, and although
n had taken exercise, and even per-
some labour in the ward during a
of that interval, the wounds on his
having cicatrized over their whole
it is quite evident that the process of
ion in the injured structures was
ctually completed; there remained
ammatory blush, and a tendency to
on about the cicatrix, and, to say the
xtensive traces of ecchymosis were
sent between the muscles of the
in short, the remote effects of the
still existed. That such an indvi-
uld have been liable to suffer from
y, pneumonia, and endocarditis, in
uence of injuries far less severe than
which were inflicted by the cat, can
y for an instant be doubted. A
incision—the extraction of a tooth,
cture of a needle even—may cause,
ve been known to produce, equally
sults in persons of impaired constitu-
It is true that the deceased appears
e been in a condition which must
rendered him extremely liable to
affected with idiopathic inflamma-
the serous membranes, in conse-
of sudden changes of temperature,
ms &c. quite independently of any
or other local injury. Yet, where a
still in a certain degree the subject of
the results of mechanical violence,
ked with inflammatory disease iden-
type with that which has been known
y in innumerable cases as the evident
nence of wounds previously inflicted,
ficult to avoid the conclusion that
ternal inflammations did not occur
bically, as the result of accidental
ces, but that they were actually,
remotely, produced by the external
, and by the constitutional distur-
and depression which followed those
s. Still we trust it will not be con-
that we impute the death of this
ther to the excessive severity of the
ment which he received, or to any
on the part of his medical atten-
we have already shewn that the
mation from which he perished was
ind which was liable to result from
ely slight causes, and we believe that
nishment having been inflicted, the

casualty which unfortunately occurred was as unavoidable as it was unexpected.

We must regret that, notwithstanding the frequent cross-examinations to which the medical witnesses were subjected, their evidence respecting the post-mortem appearances observed in this case was, in many respects, not calculated to satisfy the profession respecting the real condition of the parts. Of late years considerable attention has been paid to the fact that persons of intemperate habits, who die of internal inflammations consequent upon operations and injuries, are usually found to be the subjects of old organic lesions of the principal viscera of the abdomen,—the liver, spleen, and kidneys; and numerous, and we believe strong arguments, have been adduced in confirmation of the opinion that such disease of the viscera has a very strong influence in determining the occurrence of inflammations of serous and other tissues in persons suffering from external wounds. In this case, however, this important question seems to have been almost entirely overlooked. The kidneys and spleen appear to have been subjected to cursory examination, unaided by the microscope, which has recently afforded such substantial aid in detecting minute but important structural alterations in these and other organs; and the liver, although marked on its surface by traces of old inflammation, and so greatly enlarged *as to extend three inches below the margin of the ribs*—the gall bladder, at the same time being small, and containing only "a portion of *pale-coloured bile*"—was still declared to be healthy in structure. We have no hesitation in affirming that no organ enlarged to this degree, and secreting imperfectly, could, by any possibility, have presented a healthy structure. It appears to us to be by no means improbable that some of the fibres of the dorsal muscles should have suffered rupture during the spasmodic contractions into which they must have been thrown during the infliction of the punishment; but the presence of the traces of ecchymosis in the neighbourhood of the multifidus spinæ appears to us to be the strongest fact adduced by Mr. Wilson in proof of his opinion that the muscle in question had sustained especial injury. To anatomists, this gentleman's description of the pulpy and softened state in which he found the muscle, must be by no means satisfactory, and certainly carries with it no proof whatever that disease was propagated from the injured muscle to the costal pleura. "I find a part of the deepest line of muscles, viz., that which lay in contact with the bones in a state of disorganization, and converted into soft pulp. In medical language I should call this a 'pulpy softening of the muscles,'" is by no means a very expressive indication of the actual changes which had occurred in the part. We are not told that the structure was in the condition of a muscle which had become crushed and disorganised by mechanical violence; it is not mentioned that the tissues of the part had suffered destruction either by suppuration or gangrene; it was, in fact, in the witness's opinion, a "disorganisation which would in time have been repaired"—a loss of cohesion, we apprehend, in the structure, combined, perhaps with some laceration, of its fibres. At all events, if Mr. Wilson considered that he had discovered some hitherto undescribed lesion of the tissue, it was, and is still, incumbent on him to state its precise characters in such a manner that the other medical witnesses, and the profession, might judge of its nature and its extent. Certainly it really appears to us to have been a matter of extreme hazard,—in a case where the individual had been dead eleven days in one of the hottest seasons ever known, where two post-mortem examinations had been previously made, and where the body had for some days been inhumed,—to declare that the discoloured and softened condition of one of the small muscles of the back which was exposed to imbibition from the putrefying organs and fluids of the thorax, and in which the traces of suppuration or gangrene do not appear to have been evidently present, had during life been the seat of inflammatory action, which action had thence extended through intermediate structures to the pleura. Admitting, however, for an instant the accuracy of the unproved hypothesis, that the discoloration and softening of this muscle were due to vital changes, and that inflammation was propagated from this muscle to the pleura, will any medical man be found willing to join in the belief that the endocarditis, as well as the pleurisy, was the result of inflammation directly propagated from structure to structure, and this too where "the pericardium was healthy, and not containing more than its natural quantity of fluid." It is now very generally believed that, in cases of this description, the inflammatory conditions of internal tissues occur secondarily to the outward injury as the results not of morbid action directly propagated from tissue to tissue, but in consequence of constitutional derangement: and we believe that not a single pathologist in England, with the exception of Mr. Wilson, would be found willing to attribute inflammation of the endocardium, pulmonary artery, and aorta, involving only the cardiac portions of the vessels—the interior of the pericardium remaining sound—to diseased action propagated in any imaginable direction from a softened and inflamed tissue on the exterior of the thorax.

It has long become a recognised fact that the resolutions of an "enlightened jury" must be received as absolute, however far from unimpeachable they may be; but we cannot help feeling astonished that, to say nothing of the contrary opinions which were maintained by the military surgeons—all men of experience and judgment—the view of Mr. Wilson was at once adopted in opposition to that of Mr. Day, the gentleman who was at first deputed by the jury themselves to investigate the case. The only favourable construction which we can place upon this otherwise inconsistent course is, that the jury were probably confirmed in the correctness of Mr. Wilson's view by Mr. Day's admission that "he quite agreed with Mr. Wilson about the change of muscle," although it did not appear to him to have any connection with the inflammation in the lining of the chest.

We shall conclude these observations with a single comment upon the practice, common, we believe, to both services, of inflicting corporal punishment for offences committed by drunkards. We are aware that deaths in consequence of military punishment are exceedingly rare, and it is possible that robust soldiers and sailors who have been long accustomed to excess in the use of ardent spirits, escape for a longer period than do the over-wrought, ill-fed, and dissolute inhabitants of large cities from the extreme constitutional effects of this kind of debauchery. But we have no hesitation in saying, that wherever habits of intemperance have produced those organic lesions of the abdominal viscera to which the immoderate use of alcohol invariably causes a tendency, every kind of laceration, however slight, inflicted upon the body of a person thus diseased seriously imperils his life. No crimes can be considered more brutal or more unpardonable than those committed by men in a state of frantic inebriety; but to administer a severe flagellation to a confirmed drunkard is to place his life in imminent danger—a danger which is certainly not inevitable, but which is as assuredly invariably menaced. Unless it be intended to render the offence its own punishment, and to inflict on the culprit a penalty of the most fearfully uncertain nature, some new means of correcting offenders of this class should at once be devised. The question, it will be perceived, does not regard the *degree*, but the *nature* of the punishment. The fifty lashes which the Commander-in-Chief humanely proposes to render the limit of corporal punishment in the army will, in such persons as these, prove, as Mercutio says, "enough;" and although such a result may not occur in more than one case out of a thousand, the executive officers of the two services will, from time to time, continue to find that they have most unintentionally inflicted the penalty of death upon some unfortunate delinquent whom they merely intended to visit with severe chastisement.

We conclude this painful commentary with a word of serious caution to the medical officers of both services. *No man can be considered in a fit state to be submitted either to flogging or to any other operation involving extensive separation of organised tissues, until it has been observed that the liver is not perceptibly enlarged, and that it appears to perform its functions naturally; that the heart and lungs present no evidences of organic lesions; that there are no indications of splenic disease; and that the urine is healthy in its character, and free from albumen.*

Selections from Journals.

CHEMICAL PATHOLOGY.

ANALYSIS OF THE URINE, BLOOD, FÆCES, AND VOMITED MATTERS, IN CHOLERA SPORADICA. BY DR. HELLER.

A CASE of sporadic cholera, which proved fatal, having come under the notice of Heller, a careful examination was made by him of the blood and of the several excretions voided during life. The results of this examination are of considerable interest, inasmuch as hitherto but few, and these not very satisfactory, analyses of the various animal fluids in this disease have been published. The patient was a robust man, 30 years of age; he was attacked suddenly with severe and continued vomiting and excessive diarrhœa, which continued until his death, on the fourth day from the commencement of the disease.

The quantity of *urine* secreted was exceedingly small—not more than half an ounce in twenty hours. It was examined three different times, and the results of each analysis were the same. It was of a deep golden-yellow colour, and possessed a faint but very peculiar odour. When voided, it was tolerably clear, but shortly deposited a small quantity of flocculent mucus, and a fine sediment of earthy phosphates. It had a strong acid reaction; specific gravity 1018. The addition of nitric acid detected a large quantity of a peculiar animal matter, to which the deep colour of the urine was obviously due. When first the acid was dropt in, an intense violet-red colour was produced; this, on shaking, was changed to a dark carmine-red, and then to a dark violet, which remained. When a large quantity of acid was added, the colour assumed was a dark-brown, which was permanent. These peculiar changes in colour produced by nitric acid were probably due to the presence of altered bile-pigment in the urine. Had the pigment been ordinary biliphoein, a green instead of a red colour would at once have been struck on the addition of the acid*. Another effect produced by nitric acid was the evolution of a large quantity of gaseous carbonic acid. No albumen was detected. The addition of ammonia caused an almost entire disappearance of the earthy phosphates, and changed the golden yellow colour of the fluid to a brownish red†. The addition of a salt of silver to the acidulated urine shewed that almost all the chlorides had disappeared. When the same salt was added to the non-acidulated urine, a precipitate was formed, which was soluble in nitric acid with an abundant evolution of carbonic acid gas. A salt of baryta detected very little of the sulphates, but also gave rise to an abundant disengagement of carbonic acid. On boiling, all the carbonic acid disappeared; which proved that the acid existed free in the urine, and that it was in all probability the chief cause of its high acidity. 1000 parts of the urine contained 955·67 parts of water, and 44·33 parts of solid constituents. Of the latter, 10·50 consisted of urea (12·8 being the average quantity in health), about 0·10 of uric acid, 27·32 of extractive matters, together with a large quantity of the peculiar animal substances above described, and which most probably originated from bile, 6·41 of fixed salts, which consisted in great part of phosphate of soda and sulphate of potash. With regard to the uric acid, it should be remarked that the crystals of it thrown down by the addition of hydrochloric acid had a square form, and were of a beautiful deep blue colour. When viewed by reflected light, these crystals presented a brilliant violet-red colour, with a metallic lustre, like that of titanium; by transmitted light, they appeared of a beautiful blue colour throughout, and formed a fine layer over the violet-coloured urine. This peculiarity of the uric acid crystals obviously resulted from their being combined with the pigment above described. For, in addition to the previously-mentioned reasons for regarding this pigment as somewhat different to ordinary biliphoein, and as probably a modification of it, it may be stated that the crystal of uric acid, deposited through the action of hydrochloric acid from urine containing even a very large quantity of biliphoein, as in cases of intense jaundice, are never blue, but always yellow. The almost complete absence of chlorides from the urine is also very remarkable, since these, especially chloride of sodium, appear to fulfil an important part in the system. Lastly, the large quantity of free carbonic acid contained in the urine is a highly curious circumstance; true, it is often found largely in the urine, in combination with ammonia, but it is then a product of the decomposition of urea, and is coincident with an alkaline condition of the urine; but in this case there was no carbonate of ammonia present, and the urine possessed a highly acid reaction.

---

* Vide MEDICAL GAZETTE. New Series. Vol. i. p. 1080.

† Loc. cit. p. 1089.

The blood which served for analysis was obtained from the carotid artery after death. It was generally fluid, though coagula were found here and there in the blood-vessels, and especially in the cavities of the heart. It was very dark, yet strongly coloured, and of a tolerably thick consistence. The quantity of fibrine was very small. Beneath the microscope the blood corpuscles appeared indented, and many fat-globules were observed. The serum, after the subsidence of the red corpuscles, was of a dark-yellow colour, and an alkaline reaction. It contained a full quantity of albumen, but not a trace of biliphœin could be detected. The quantity of fat was large; that obtained by ether and alcohol was perfectly saponifiable, and contained no cholesterine. When examined for urea by Simon's process, it was found to contain a very large quantity of this substance. This was manifestly the result of the great suppression of urine. The proportion of fixed salts in the blood was much increased, especially the quantities of the chlorides of sodium and of potassium, which were absent in so marked a degree from the urine. A similar circumstance was noticed by Phœbus.

The fæcal evacuations, which were very abundant and frequent, were watery, and of a turbid whitish, gruel-like appearance; the fæcal odour was but seldom perceived. They had an alkaline reaction, and contained albumen. By nitric acid their colour was changed to a deep brownish-red, which passed into violet, exactly resembling, therefore, the changes produced in the urine by the same reagent; ammonia also produced here the same dark-brown-red colour as it did in the urine. The same peculiar substance, therefore, which was found in the urine, and regarded as altered bile-pigment, was present also in the fæcal evacuations. Simon, also (as well as others), mentions this peculiarity of the bile in the fæces of cholera, being frequently coloured red instead of green by nitric acid.* Crystals of ammonia and phosphate of magnesia were also found in the fæcal evacuations in this case.

The matters vomited during the progress of the disease were very watery and of a
greenish or yellowish-green colou
a slightly acid or neutral re-acti
was the most essential ingredie
reacted towards nitric acid a
biliphœin would, the first change
produced by the acid being green.

In conclusion, it would seem as
disease a peculiar change or dec
was undergone by the bile, and i
important to ascertain whether
alteration of this fluid takes place
cases.*—*Heller's Archiv.*

Medical Intelligence

SUMMARY OF IN-PATIENTS ADMI
THE LONDON HOSPITAL IN TH
1845.

		Discharged	Die
Physicians'	Male	513	6
	Female	370	3
Surgeons'	Male	1781	7
	Female	739	4
	Totals	3403	22

UNIVERSITY COLLEGE HOSP

A LADY of the name of Swan
deceased, has bequeathed a lega
hundred pounds to this hospital,
be added to the fund for the build
north wing, now in progress of ere

CHARITABLE INSTITUTIONS IN

ACCORDING to a recent memoir
by the Baron de Watteville,
General of Charities, there are in
the present time 1338 hospitals o
ries for the sick, the ordinary re
which exceed two hundred thousan

CONTAGIOUS DISEASES PREVENT

A BILL is now before Parliament
of which is to enable the Privy Counc
regulations for the prevention of c
disorders, and for the more speed
of nuisances. Although there mig
the least foundation for the alarm
in certain quarters, that we are t
with the visitation of the choler
many impurities and nuisances
affecting health, prevail in differe
it is necessary that summary pow
be taken for their removal.

---

* Animal Chemistry, Dr. Day's Translation, vol. ii., p. 383.

* In a note, Heller mentions havi
quently met with a case of morbus B
peritonitis, in which the same altere
ment as above described was foun
urine.

ing of the Public Cemeteries
d that the object of the measure
l;—first to prevent all interments
recincts of large towns or popu-
; secondly, to prevent dead
being kept in the rooms of the
s for an indefinite time, a prac-
nduced many pestilential dis-
thirdly, to limit, in some mea-
rbitant charges of undertakers
which the poor were unable to
vidence given before the Health
mmission had fully established
cts of permitting interments in
of allowing corpses to be
eral days in the same rooms
ng members of the deceased's
remedy these evils it would be
place certain powers and ma-
he hands of the Government;
l to be no other course, notwith-
e strong disinclination in the
entralization. This bill, accord-
osed that a commissioner or
rs be appointed to act under a
of Privy Council, and to report
tence of any nuisances affecting
health. The commissioners
ire and report the extent of the
nentioned in the metropolis, and
re epidemic disease might appear
nt, or whenever they received a
om any parish or union; and
state to the Committee of Privy
existing extent of space pro-
urials in the district, and the
consecrated and unconsecrated
ired, with plans and estimates

THE CHOLERA IN LONDON.

The public journals inform us that two members of the Academy of Medicine have just set out for London to watch the progress of the sporadic cholera, many cases of which have shown themselves in this city. It is said that several peculiarities are observable in this disease in London which renders an examination interesting and useful to medical science.

AMORPHOUS QUININE.

We have received a letter from Mr. Bullock in reply to a communication on amorphous quinine by Mr. T. Redwood, inserted in our last number. The writer strongly denies that the patented amorphous quinine is adulterated with 30 or 40 per cent. of foreign matter, as alleged by Mr. Redwood, and considers that there has been an error in Mr. Redwood's analysis.

With respect to the question of patents, we by no means intended by the remark attached to Mr. Redwood's letter to imply that the "amorphous quinine" was one of the class of "*patent medicines*," of which the constituents are either kept secret, or so equivocally stated as to mislead those who, on the expiry of the patent, wish to imitate them. Nevertheless, we have a decided objection to the patenting of an article of this kind, as the result must be to add to its cost, and render it less easily accessible to the poor.

MEDICAL APPOINTMENT.

On the 29th ult. Dr. A. B. Garrod was

time of death the deceased was in an advanced state of pregnancy. The extraordinary precision of these replies induced the legal authorities to order another examination of the remains. The reporter properly remarks that many difficulties must present themselves, especially in relation to the variable rapidity of the putrefactive process. As to the fœtus, which is so liable to speedy decomposition from the softness of its structures, it might become a question whether, should any of the bones remain, its age could be determined so that the degree to which pregnancy had advanced might be stated. It is quite possible, however, that, under these circumstances, the bones of the female might be found entire, while those of the fœtus would be entirely destroyed.—*Gazette Médicale.*

THE POTATO DISEASE IN 1846.

M. Payen, who made many researches on this subject in 1845, has recently announced to the Parisian Academy that the disease observed among the potatoes last year has reappeared in the new crop, both in France and other countries. This fact is the more remarkable, since the summer of 1845 was damp and cold, while that of the present year has been dry, and remarkable for its very high temperature. M. Payen recommends that the stem and leaf of the plant should be watched, so that on the first appearance of a change the tubers should be dug up and used for food. The greatest risk of damage is at the period when the tubers are in the act of ripening.

Many varieties of young potatoes lately sent to the London market have presented traces of the disease. Those which have been boiled have had an offensive smell, resembling sulphuretted hydrogen; and, although apparently sound on the exterior, the central portions were pulpy and white; in some instances, however, the centre had a dark colour.—*Comptes Rendus*, Juillet.

EFFECTS OF THE APPLICATION OF COLD TO THE SKIN.

According to M. Robert-Latour the effects produced by the application of cold to the living body are physically explicable by the condensation of the tissues, and by the retardation of the capillary circulation. The increase of heat experienced in a part exposed to cold, which becomes thereby reddened, is not real. M. Latour plunged his foot while at a temperature of 77° into water at 48½°. In a quarter of an hour the foot had acquired a red colour, and its temperature had fallen to 55°. When taken from the water and wrapped up, a thermometer in contact with it rose in ten minutes only to 66°; and yet there was a strong burning sensation in it, from which the other foot at 77° was entirely free. The action of cold is borne more easily, and for a longer period, in proportion as the normal temperature of the body is high at the time of its application. A man in whom the temperature of the axillæ did not exceed 95°, could not bear an immersion for *one minute* in water at 55°. Another, in whose axilla the thermometer rose to 102°, was able to remain immersed in the same water for upwards of *five minutes.*

Whether the temperature of the living body be increased by exercise, or by surrounding it with non-conducting materials, it can never be raised more than 3½°. Perspiration is then established, and this takes place whatever may have been the observed temperature. Thus, in a man at 95°, the temperature may be raised to 98½°, but not higher: in another at 102°, it may be increased to 105°. When this increase of 3½° has been once reached, the body may be exposed without injury to the action of cold water, provided the application of cold is withdrawn so soon as the surface has fallen to the temperature which it had before this was artificially raised.—*Comptes Rendus*, Juillet.

OBITUARY.

DR. J. BOSTOCK.

On the 6th inst., at 22, Upper Bedford Place, John Bostock, Esq., M.D., F.R.S., in his 74th year. Dr. Bostock was well known to the profession as a chemist and physiologist, although, for many years past, he had withdrawn from the active pursuit of science. He formerly lectured at Guy's Hospital, in conjunction with the late William Allen and Mr. Aikin, taking the department of Organic Chemistry. He was a man whose disposition was marked by great benevolence and kindness, and he was deservedly respected by all who had the pleasure of knowing him.

DR. THIBERT.

On several occasions lately, we have had to direct the attention of our readers to the collection of artificial preparations in pathology made by Dr. Thibert, and exhibited within the last year in London and Paris. We regret to announce the decease of the ingenious inventor, who had only reached his thirty-sixth year. Health, youth, and fortune had been sacrificed by Dr. Thibert to the perfecting of these models, and it appears that his life was brought to a close at the very time when there was some prospect of his reaping a reward for his scientific labours.

DR. ALEXANDER.

On the 4th inst., at his residence, 6, Sussex Terrace, Hyde Park, George Alexander, Esq., M.D., of the Hon. East India Company's Service, aged 69.

Lectures.

SUBSTANCE OF A

NICAL LECTURE,

t St. George's Hospital,

ESAR HAWKINS, ESQ.

rgeon to the Hospital.

June 23.

—Post-mortem Examination.
and Inflammation of the
ints.
Tarsal Joints—Excision of
the bones.
Tarsal Joint, and of the
—Chronic Abscesses of Arm
—Excision and Amputation.
Wound of Arm.
Wound of Arm—Secondary
age.

T since I brought under your r two cases of paraplegia, and that of Edward Warman,* who then dying of some fatal affec- you I thought it probable that arose from some disease in or marrow, but whether it was he medulla, or some new forma- on it, or of what nature it might t say, as we only had the evidence nctions, which might be equally many different causes. After he patient had little change of On June 15th it is said he is ne; the slough has come away k, but not quite from the ankles; ntains less pus, and is slightly re is rather more incontinence On the 19th, he seems to be r, and is very low; there is in- of urine and fæces; no motion out sensation is perfect in both; , or nearly alkaline, and con- little pus; then he gradually ed at ½ past 11, on the 21st, ned the body yesterday. I will account in the register.

l formed, but emaciated, with s of the lower extremities; large the sacrum, heels, trochanters, ; the sore on the sacrum was where the whole thickness of was destroyed. Putrefaction advanced, especially about the ck, and back part of the trunk, in was of a dark green colour. antity of turbid fluid was found both in the subarachnoid cellular tissue and in the ventricles of the brain, but no diseased appearances could be detected about the structure of this organ, notwithstanding a minute examination. Some clear serum was found in the subcutaneous cellular tissue of the loins, and a quantity of blood-tinged serum was found in the lower part of the theca vertebralis, but no diseased appearances could be detected in any part of either the spinal cord or its membranes; the structure both of the spinal marrow and brain were somewhat advanced in decomposition. A few old adhesions existed on the left side of the thorax, and a small patch of tubercular matter was found in the apex of the right lung. Both lungs were emphysematous at the fore part, and loaded with red frothy serum at the back part. The heart was healthy, as well as the valves; some patches of atheroma existed about the root of the aorta; some small loose coagula were found in all the cavities, the lining membrane of which was slightly discoloured.

The liver, spleen, and intestines, presented nothing remarkable; both kidneys were dark coloured and congested, the left being larger than natural, but no morbid deposit was found in either of their structures; the mucous membrane of both pelves of the ureters was quite healthy. The bladder was thickened, and somewhat larger than natural; the muscular structure was hypertrophied, and strongly fasciculated, forming large bands projecting into the cavity of this organ; the mucous membrane was thickened, and of its natural colour, except in the verumontanum, where it presented an ecchymosed appearance. In the left lobe of the prostate was a cavity of the size of the end of a large bougie, perfectly smooth, and communicating with the urethra by an opening which passed off at right angles from this canal; there was no ecchymosis in the structure of the prostate, which was otherwise healthy; this cavity in the prostate contained some foul matter.

The post-mortem examination has been, then, very unsatisfactory, as it so often is with regard to the cause of paraplegia; particularly so in this case, in consequence of advanced putrefaction arising from the unprecedented state of the atmosphere at the time of the patient's death, which makes it difficult to decide whether there had been any softening previous to death, or not, either in the brain or spinal marrow. The quantity of fluid in either part is also influenced by the same cause, and probably had we seen the examination without knowing that there had been paraplegia, we should have said that there was no important alteration of appearance. If it be so, and I think the softening and morbid deposit of serum must at any rate have been very

---

. 136 of the present volume.

trifling, you see the truth of what I told you, that the absence of any discovered cause of palsy is no proof that there may not have been some alteration that we are incapable of detecting with the eye; and the putrefaction prevented any use of the microscope.

There was no sign whatever of any effect of the injury he described, nor was any reason apparent for the constant pain in the left side, which may therefore be referred, in all probability, to the same lesion, whatever it may be, of the nervous system, which occasioned the loss of power and sensation and nutrition in the limbs.

There was not much enlargement of the prostate, nor did we expect much, the difficulty of expulsion depending in many cases not upon the absolute size, but on the relation it bears to the natural form and course of the urethra through it. The cavity in the prostate was supposed by some to be a false passage made by some one of those who passed the catheter for him; I think it was not so, however, but was a small abscess, such as often forms in this gland, because there was, I understand, scarcely ever any impediment to the easy passage of the instrument, and also because it communicated at a right angle with the urethra, and had a smooth lining with an obtuse end, instead of being a kind of continuation of the urethra at a more or less acute angle with the posterior part of the canal, with a ragged surface in its interior, which is generally the case where a new passage has been made by force.

The incontinence and retention of urine and purulent secretion, besides being probably antecedent to the injury, were clearly owing chiefly to the disease of the prostate, as the fasciculi of the bladder were enlarged considerably from the increased attempts to overcome the obstruction of the passage of the water; and the absence of any considerable inflammation of the bladder, and the healthy condition of the kidneys (not yet affected as they would have been in time if the obstacle had continued), leave us nothing to account for his death, except the gradually weakening effects of the paraplegia.

You will remember what I said to you regarding Mr. Stanley's theory, of paraplegia being caused, without organic change in the spinal marrow, by the nerves of a diseased kidney, so as to impair the functions of the nerves of the extremities. The examination of Warman seems to be a good example of the fallacies which all of us are subject to in reasoning on medical subjects. We have seen that there was no renal disease; but suppose we *had* found abscesses or other disorganization of this organ, which might easily have been the case from the two causes which were in operation, viz., the disease of the prostate, which always affects the kidneys at last, and the impaired functions of the spinal marrow, which would also have probably occasioned disease of the kidneys, if the patient had lived long enough for the sensitive portion of the spinal marrow to have become as much affected as the motory; in such a state of things Mr. Stanley might naturally have said, here is exactly what I have written to assert the existence of, a disorganized kidney with paraplegia, without sufficient disease in the spinal marrow to account for it; it is, therefore, a functional disorder, propagated, as I have said, to the nerves from the kidney. In the absence of renal disease, however, in Warman, we cannot resort to this explanation of the paraplegia, and we are obliged to acknowledge that paraplegia cannot always be traced to its cause, or else to carry on Mr. Stanley's reasoning analogically to the disease of the prostate, as the cause of the functions of the spinal marrow being disordered, which appears, as I told you in a former lecture, to be contradicted by the fact of your seeing a hundred cases successively of fatal disease of the prostate, and of the bladder and kidneys, following the prostatic disease, without once seeing it conjoined with paraplegia.

I will next direct your attention to two cases of disease of the joints of the foot, which is not uncommon, and the consideration of which is of some importance, as you will be consulted about it in all classes of society in different stages of its progress.

The arch of the foot consists of a series of elastic joints, which serve, like the complicated joints of the spine, to diffuse among them all the effects of jarring and straining in the exertions of walking, running, leaping, and so on, which would be seriously felt by a single joint, and would, without the elasticity which is thus produced, occasion mischief to the viscera, and even to the spinal marrow and brain. Now, it is very common in weak persons, especially in children, for the ligaments of these joints to become relaxed, so that the sole of the foot is flattened, and little or no arch remains, the under surfaces of the navicular and cuneiform bones at the top of the arch sinking down so as nearly to touch the ground; the consequence of this is, that the jarring of the motions of the body is constantly felt, and the patient's gait is awkward, and there is pain and inflammation, with lameness, from time to time, according to the variations of the general health. A gentleman was under my care, not long since, who suffered so serious an inconvenience from this state of things that he was scarcely able to do duty for any length of time for two years, and was almost obliged to quit the army before he got well.

But the affection soon spreads to the internal lateral ligaments of the ankle joint, because the flatness of the arch on the inside of the foot throws down the inner malleolus, and alters the angle of the foot with the leg, so that there is a constant strain on the internal ligament; every step makes the tibia approach the ground, and bend the ligament inwards, which adds to the awkwardness of the patient's walk; there is, however, very often a similar straining and giving way of the internal lateral ligament in other cases, without any flattening of the arch of the foot.

But this is not all: a young lady was seen by a medical man in consequence of her lame and awkward walking, and was ordered a knee-cap for a weakness and straining of the internal lateral ligament of the knee-joint, and she had also some lateral twisting of the spinal column, which, arising from constitutional debility, was made worse by the giving way of one leg in walking; in fact, the turning and twisting of her limbs, and the awkward movements of the whole body, were so great, that her mother was almost ashamed of letting her be seen going out; the knee-cap was very right and proper, but it did nothing for the original cause, which was the flatness of the foot; this made the ankle sink inwards; then the strain on the knee was such as to increase the natural angle between the leg and thigh, and finally even the spinal column was distorted; and the greater part of the mischief was conquered by supplying an artificial arch to the foot.

When the tarsal ligaments and the lateral ligament of the ankle are simply weak or relaxed, without pain or inflammation, you must raise the centre of the arch of the tarsus, and take away the strain upon the ligaments which the weight of the body occasions, till they have had time to contract and to regain their natural elasticity and strength. This is to be done by getting an intelligent shoemaker to fix carefully in the inside of one or both boots, a sufficient thickness of India-rubber, or cork, or leather, to raise the inside of the sole of the foot to its proper height; the support must, therefore, reach from the os calcis to the ball of the great toe, being thickest in the middle of its inner margin, and being made gradually thinner towards each extremity, and towards the outside, where it need only reach about half way across the bottom of the foot. If the internal lateral ligament of the ankle is much weakened, you may also have a piece of thick and nearly inflexible leather fixed in the leg part of the boot, between its inner and outer layers, of whatever material they happen to be, taking care that it is not so placed as to press upon and hurt the projecting part of the inner malleolus. In a very bad case in an adult, I have known more relief afforded by an iron being fixed on the outside of a strong boot, having a leather strap passing from it through a slit in the foot of the boot, and securing the arch of the foot to the outer support; it is, however, an awkward apparatus, which can scarcely ever be necessary; and the other means are not seen so as to excite attention. While mechanical support is thus given, the feet and ankles may be strengthened by friction with any liniment, and by bathing in salt water. As the constitution is also generally in fault, the system must at the same time be strengthened by the use of steel and the shower-bath, or by sea bathing, and other forms of tonic remedies.

If there is pain and inflammation in the part this must first be got rid of by rest, and cold applications; and, if it is considerable, a small blister must be applied to the inner part of the foot before the patient is allowed to walk about; but I do not remember having ever found this necessary except in adults.

But at last, when these cases are neglected, the inflammation of the ligament spreads to the joints; they also become inflamed, and the synovial inflammation terminates in ulceration of the cartilages and ankylosis, if the disease is stopped, or else in the formation of abscess in and around the joints, and in caries and necrosis of the bones.

The situations in which the joints are commonly affected are the joints of the inner cuneiform bone with the metatarsal bone of the great toe, and that of the metatarsal bone of the great toe with the first phalanx, and sometimes both are diseased in the same person. I have thought that the latter joint is more often affected in females, and have been inclined to attribute this to their different mode of walking, the thin-soled shoe allowing of much more play of this joint, and leading them to walk, as it is called, more on their toes than in ourselves, in whom more strain is consequently thrown upon the arch. I am not certain, however, that there is such greater frequency as to make the observation really well founded.

Of the advanced stage of this disease of the joints you have had an example in the case of John Alexander, 23 years of age, who was admitted on March 11th. He is a groom, in whom the exercise of riding keeps up the same strain on the ligament of the tarsus which much walking will do: the disease began about three years ago from an accident, his horse having fallen with him, his left foot being under him. The notes say that it caused him little trouble till about five months ago, when it again became inflamed without any evident cause, but I understood he had felt the effects of the injury from time to time after exertion. This did not prevent his usual occupation till three weeks ago. He has had leeches and blisters applied. There is not, nor has there been, much pain in it. On his admission it was evident that the cartilage between the internal cuneiform bone and the metatarsal bone of the great toe had been absorbed and there was partial anchylosis between them, with some thickening of the soft parts, which obscured the arch of the foot. You have seen the disease make progress since that time, in spite of remedies, till I was obliged to operate on it last Thursday.

I tried to subdue the inflammation of the part by rest, with blisters, of which he had two, but they only relieved him at first; and on the 3d of April the notes say, he has less pain, but more fluid: and on the 6th I opened it to let out a little matter. On the 27th I was obliged to enlarge the opening, and again on May 1st, from thickening around the joint, with more suppuration. On the 7th May it is stated that there was some puffiness on the dorsum of the foot, and as this increased I was obliged to open it on the outer part of the foot, matter having apparently formed and passed beneath the extensor tendons. On the 25th a mass of fungous granulations of considerable size began to form over the joint, with a disposition to bleed occasionally, and to become sloughy, and the pain became worse, and began to affect his health, so that some operation or other was called for. I tried at the same time to improve his health by sarsaparilla and iodide of potassium, which are useful in some cases of caries of the bones, and afterwards by bark; latterly I have only given him ammonia and opiates to relieve the irritation of the disease: and on June 8th it is noted that there was a little cough and expectoration of mucus, and pain in the left side of the chest, which still continue slightly. A state of threatened phthisis is sometimes an argument for, and sometimes against, an operation. If an operation is severe, and causes much constitutional disturbance, undoubtedly the disposition to form tubercles is much increased by it, and consumption therefore often makes rapid progress after an amputation, or other great operation: on the other hand, an irritating local disease is itself a cause of consumption, which is hastened by whatever produces debility or other deterioration of the general health, and an operation which removes irritation may retard the progress of phthisis instead of aggravating it: it is a chance which you cannot always calculate before hand, but much irritation on the whole is worse than a moderate operation, and we therefore determined on its performance in this case.

It was difficult to know exactly how far the disease had spread, though the quantity of soft swelling on the back of the foot made it not improbable that it was no longer confined to the joint of the internal cuneiform, and the metatarsal bone of the great toe, and the proximity of the other joints to this makes inflammation easily spread from one to the other. When there is a little piece of necrosed bone, or caries, confined to the inside of the foot, I have often removed the disease with success, and on consultation it was determined that we would endeavour in this case to save the foot by excision of the diseased parts. The operation on the 18th June is thus described in the notes:—An incision being made in a linear direction along the junction of the middle cuneiform and metatarsal bone, a probe was introduced, and the corresponding surfaces of these two bones being found carious, and their surfaces exposed, an incision in the same direction as the preceding was made through the original wound on the inside of the foot, and the two were connected together by a transverse one, forming two flaps, which were partially dissected from the bones, and the surfaces of the internal and middle cuneiform, with the corresponding surfaces of the two metatarsal bones, were removed with a pair of bone forceps. The bleeding was restrained with difficulty, from the deep passage of the posterior tibial artery among the tarsal bones: three ligatures were used, and a piece of blue lint was placed in the wound.

When I found that the second joint was diseased, and possibly the third was not sound, I felt half inclined to remove the foot in the line of the cuneiform and cuboid bones; but we have, as you have seen, given the man the chance of the part becoming filled up and consolidated, so as to assist in bearing the weight of the body better than a stump alone; the arch, of course, becomes shorter and somewhat weakened, and an artificial support may be required, but if it succeeds this is better than only the heel to walk upon. There has been very little disturbance from the operation, and the notes of yesterday say that the granulations of the wound seem very healthy; there is less pain since the operation than before, and his health seems to be improved, but he still has slight cough, and pain in the chest.*

I confess I do not feel very sanguine about this case, in consequence of the patient's very bad state of health; but if some other joints do become diseased it must be our object to observe it early, so that the foot may be removed either along the line of the present operation or between the navicular and cuneiform bones, according to Chopart's proposal, before the whole thickness of the navicular bone becomes affected; because if the joint of the navicular bone with the astragalus is diseased, there is little chance of its not implicating the ankle-joint also, so as to require amputation of the leg.

---

* Subsequently, however, the progress of the case, both as to the chest and the appearance of part, has not been quite so favourable, making the ultimate result doubtful.

In the other case you have the same joint affected on one foot, and the joint of the metatarsal bone with the great toe on the other foot. This patient, Maria Patch, 19 years of age, was admitted May 6th with caries of the metatarsal bone of the great toe (the left). The probe passed into the sinus shows the joint between the metatarsal bone and first phalanx to be destroyed, and a portion of the phalanx to be exposed, and partly dead. There is much œdema and thickening of the tissues around the sinus, from which grows a mass of large fungoid granulations. There is great discharge and aching pain in the part, and a good deal of thickening of the parts composing the ball of the great toe.

There is a small sinus in the right foot, which leads to the internal cuneiform and metatarsal bone, and to the joint between them, but the disease is not so far advanced as on the other side. There is some thickening around the sinus, but not much pain. On the outer side of the right elbow there is a small circumscribed abscess about the size of a walnut, sensibly fluctuating; and at the back of the neck is an irregular oblong fluctuating abscess, both of which have been forming gradually for the last two months. Seven months ago, without experiencing any accident, she had swelling of the inner side of the left foot, and in two months an abscess formed and burst, and has continued to discharge since that time: she has not seen any bone come away. The right foot became affected about the same time. She is of a pale and unhealthy aspect, and is a servant of all work, and came from the country not many months before the disease began.

In this latter circumstance I believe you see the reason of her illness. Having changed the purer air of the country for an underground kitchen in London, with incessant work upon her feet, a state of blood was produced which made the vessels of different parts of the body disposed to form some local inflammations, particularly in one originally of a strumous constitution, likely as well as the last patient to have phthisical tubercles developed in the lungs.

I first tried to improve her health by giving her sarsaparilla and iodide of potassium, with some porter and good diet, and have lately changed this medicine for some bark and mineral acids, but without much alteration for the better. As the abscesses were not red or inflamed I also gave them the chance of being absorbed, (if the proportion of pus in the fluid was not great,) by applying the strong iodine solution; and on May 18th the note says, both abscesses have much diminished: but this amendment did not continue, and on June 1st, that on the neck having increased in size, I opened it, and let out some pus, with flakes of lymph, and on the 5th I also let out some sero-purulent fluid from the abscess on the elbow: both of them have since contracted, and are probably healing. The disease of the feet has also got somewhat worse; the mass of fungous granulations on the left foot has increased, and there has been more irritation of the right foot, obliging me to enlarge the opening a few days ago, and had it not been for the intense heat I should have operated on her also last Thursday, but have postponed it till she will perhaps not be so much exhausted by it as she would be now.

On the right side I shall endeavour to remove the carious surfaces of the cuneiform and metatarsal bones, taking away however no more than is actually diseased, in order not to weaken the arch more than can be helped; and as the caries of the bones seems to be certainly confined to a part of the joint, we are in hopes the excision will be successful, though one can never be certain of the event, as the other joint are so close to it as easily to become affected. On the left side I must take away the whole of the toe and the extremity of the metatarsal bone, of which a very small part of it is diseased, and the more of it can be left the better, as of course the arch of the foot is weakened in proportion as it is shortened. It is no use, however, to attempt the excision of this joints, as you can do with advantage for the joint of the thumb, because the great toe would subsequently be too weak to bear any of the weight of the body in walking, and is, in fact, only an encumbrance, when thus left loose, and without firm ligamentous connexions.*

I will next draw your attention to two good examples of lacerated wounds, which came into the hospital nearly on the same day, and which afford a strong contrast in the effects of such wounds on young healthy persons, or on middle-aged or elderly persons, whose constitutions have been altered still further by habits of intemperance and free living. Louisa White, æt. 11, was admitted May 9th, with a lacerated wound, about two inches in length, situated on the inner side of the arm, just above the external condyle of the humerus, which was caused by a spike running into her arm while she was climbing over some railings, and which exposed the triceps muscle. There was also a note of the ulnar nerve being torn across, which my clinical clerk was informed had been observed, but which was clearly not the case, as the sensation and motion of the little finger was perfect. Two sutures, lint, and a bandage, were applied, and a splint put in front of the arm.

---

* The amputation of the great toe and head of the metatarsal bone of the left foot, and the excision of the articular surfaces of the cuneiform bone and metatarsal bone of the left foot, have subsequently been performed, and the patient seems to be going on extremely well.

A splint is of great use in wounds about a joint, or where muscles are injured; a bandage and plaster must be very cautiously applied, however, and removed as soon as there is any sign of swelling and tension; and in general it is better to have no bandage at all. With regard to the sutures which were used, there is no objection to their use if the part is not much bruised, provided they are very carefully removed as soon as swelling or redness shew themselves; it is better to bring parts which are not likely to unite somewhat into their proper place, as it facilitates the subsequent healing of the wound, the flaps of which become hardened and fixed in whatever position you first place them, and therefore close in more easily if preserved of their natural figure than if allowed to be turned or altered in shape; but with all lacerated wounds the chief thing to be attended to is to prevent the least confinement of the secretions of the part, not a drop of which is to be allowed to be imprisoned; the wounds must therefore be freely opened by the finger, or a director, the next day, or the second day, according to the rapidity of the inflammation. In this little girl the sutures were left in for two days, and then the wound was freely opened, and you saw that the surface soon became free from sloughs, and healed up, and she left the hospital on the 27th. In fact, in young and healthy individuals, lacerated wounds of great size will do extremely well. But the other patient was not so fortunate, and the case presented one or two points of interest during its progress to which I will draw your attention.

This patient, Ezekiel Warren, who is 63 years old, was admitted on the 7th of May with a large triangular flap wound, about two inches square, situated on the inner and posterior side of the left arm at the lower part of the axilla; the wound laid bare the small head of the triceps, the brachial artery, and ulnar nerve, and I suppose the median nerve also, and a few of the fibres of the coraco-brachialis muscle. There was also much bruising and ecchymosis of the tissues in front of the wound, which did not bleed much on his admission. There was partial loss of sensation and motion of the fingers *of the same hand.* He is of a full and drunken habit of body, being tipsy at the time of the accident, which was caused by his falling on a spike at the corner of a street. The arm was confined to the side, and cold lotion applied.

On the 9th it is said that there was a good deal of œdema and puffiness of the arm below the wound, as far as the elbow, with some swelling of the forearm; and the next day, there is increased inflammation of the arm; it is more hard and brawny, and the edges of the wound are sloughy; the discharge is thin, and of a dirty yellow colour; the inflammation extends as high as the shoulder, and as low as the elbow. Now, with cellular inflammation following a lacerated wound, had the wound been a small one it would have been necessary to enlarge it; and had the swelling been tense it would have been necessary to make incisions, in order to check the inflammation and prevent sloughing and gangrene: as it was, however, the finger could be passed freely in every direction, and this proceeding, therefore, was not required; and on the 15th it is noted that the inflammation of the arm had diminished: the lower part of the wound is sloughy, the upper feebly granulating; but it is also observed, that there was some puffiness and fluctuation on the lower part and front of the arm, and a director being passed through the original wound, it presented itself at this part, and was cut down upon, and some pus which had lodged here was evacuated: the incision was, in fact, on the outside of the biceps, the probe passing between it and the brachialis muscle. The next day the swelling and tension of the arm are said to be much diminished, and a good deal of offensive discharge comes from the wound, which is rather sloughy. There is some fluctuation and puffiness below the wound made yesterday, and a small incision was made on it, which was done by the house-surgeon, near the elbow. The arm then went on well, and on the 20th it is said, there is much less redness and tension of the arm; granulations of the wound more healthy, but there is a good deal of sloughy discharge from it.

But now we come to a new feature in the case:—On the 21st it is noted, there was some bleeding from the wounds in the night, and this morning, at half-past nine, there was a great deal of bleeding, but the quantity could not be exactly determined; the bleeding came from both wounds, but principally from the original one. He passed a restless night. Lint, with the pads and bandages, were applied to the arm. This, however, was only a temporary measure, which could not be continued in an inflamed arm without risk of gangrene of the arm; and in secondary hæmorrhage from ulcerated arteries the great thing is always, if possible, to expose the wound thoroughly, and take away the tension from the open vessels; and accordingly it is said, at a quarter to 2, when I saw the patient, that the bandages and lint were removed, which were in part soaked with blood, and the wounds filled with coagula; and after enlarging the original wound it was found that the hæmorrhage proceeded chiefly from the anterior wound, and that it was of an arterial colour. An incision was then made, of several inches long, in the upper wound, to determine the point whence the bleeding proceeded, when the whole of the muscles down to the bone and partly round it were found softened and sloughy, and bleeding from all points; my finger, in fact, touched the bone from the torn condition of the brachial muscle. Pressure was made on the subclavian and axillary arteries, as the bleeding was going on freely, and the two wounds of the arm were connected together by an oblique incision (the intermediate flap being nearly three inches wide), which laid bare, for some few inches, the brachial artery and median nerve, with the inner head of the biceps muscle. On making these incisions, and exposing the wound to the air, with the application of cold, the bleeding was stopped.

When I first examined the arm, and made the first incision, the thought of even removing the arm at the shoulder-joint crossed my mind, from a combination of several circumstances. Here was an extensive sloughy cavity, bleeding largely from apparently many vessels, which might stop as usual if I could lay it open freely; but after the enlargement of the first wound, the finger felt the humeral artery exposed for some inches, and coming near from it, and passing into the superficial mass of skin and muscle, was a cord which,, to myself and some of my colleagues, appeared to be the ulnar or median nerve insulated, and preventing a transverse incision to expose the bleeding cavity. Now the cutting across a large nerve is a very serious affair, involving the loss of motion and sensation, which may never be recovered, for wounds and operations have been followed by such effects for the whole of a person's life, particularly when there has been any loss of substance or displacement, which must have been the case here;—nor is this all, but whenever a deep or large nerve of sensation has been injured, there is a loss of power of regulating the temperature and supporting the nutrition of the parts below, just as there is in paraplegia from injuries and diseases of the spinal cord when sensation is lost. The arm, therefore, would probably have been an useless incumbrance to the man, who would never be able to touch a good conductor of heat, such as a piece of marble or iron, or put his hand into water far below the boiling temperature, without having blisters and sloughing produced, as if he had been scalded. To this was added the risk arising from a large sloughy cavity, liable to repeated attacks of hæmorrhage from ulcerated arteries, and likely to occasion absorption of matter, and secondary abscesses, and fatal irritation. On consultation with my colleagues, however, and renewed examination, there was a doubt whether it was a nerve which was exposed, and of course the least doubt on this matter would prevent the thoughts of amputation. I therefore first cut across the thickness of substance between the two longitudinal wounds above the cord, and on this being exposed, and dissecting it a little downwards into the soft substance of the lower flap, in which it was involved, it became clear that it was a portion of the short head of the biceps coming from the axilla, which I then cut across also, so as entirely to expose the parts; and the trunk of the artery being uninjured, the branches soon ceased to bleed.

There was for the present no return of bleeding, and he went on well till the 25th, when it is noted that he passed a bad night from the tight application of strapping; there was slight pain and redness of the arm, and some confinement of matter between the skin and biceps. Strict injunctions were all along given that nothing at all tight should be applied, but it is difficult to judge how far pressure may be safely applied where different persons make the application, and I have several times had to separate adhesions since that time, lest fresh mischief should ensue, which was not altogether prevented from this first premature reunion of parts, for the next day (the 26th) it is said there is slight pain, but no redness or œdema of the arm; and the following day (the 27th) there has been slight hæmorrhage from some of the granulations, which look fatty, and the discharge is thin; and the 28th, there is still some slight bleeding from the wound, and a large clot of blood fills the cavity, and the granulations are more unhealthy; and at half-past one, when I saw the patient, there was considerable arterial hæmorrhage, which obliged me to tear apart the several flaps to find its source, and I found it proceeded from an artery situated in the remains of the biceps muscle, ulcerated about half an inch from the main trunk, which I secured with a ligature, and bleeding has not again returned.

On the 31st, however, the notes specify a fresh cause of alarm, for it is said yesterday evening he had a rigor, and complained of severe pain in the forehead, and had an attack of vomiting; there is some pain and erysipelatous redness of the skin of the arm, as far as the elbow, and the discharge and granulations are unhealthy, and he has passed a bad night, and had a slight cough. This was about the period when secondary deposits were very likely to come on from such a wound as this;—here were just such symptoms as might usher them in, and the cough seemed even to point out the lungs as the probable seat of some inflammation. It proved, however, to be only an attack of slight common erysipelatous inflammation: the next day the notes say he has passed a better night, and has had no return of rigors; the redness and inflammation of the arm have diminished, the discharge from the wound is more healthy, and the wound looks better, and he has now, June 23d, got nearly safe from return of hæmorrhage and secondary inflammation, with a necessity for great caution, however, even now, that not a drop of purulent secretion is blocked up by granulations, as this immediately threatens swelling and redness.

You see, then, how different such a case as this man's is from the last, and his danger has chiefly arisen, not from the greater size of the wound, but from the intemperate habits and advanced age of the patient. The man has since left the hospital with the wound nearly healed.

FOREIGN BODY LODGED IN THE CHEEK FOR TEN MONTHS. BY PROFESSOR SOUTH.

I HAVE very recently operated on a case in which a piece of tobacco-pipe, an inch and a half long, had been lodged in the cheek for ten months, without the patient being aware of it. He had fallen with his pipe in hand, and wounded the outside of his cheek; much swelling ensued, and after a few weeks the wound healed, but he could not open his mouth completely nor without pain. Twice during the following twelvemonth, the swelling, which still remained, became very painful, increased and suppurated. The last time he came to me, and the piece of pipe was readily discovered running from half an inch behind the angle of the mouth horizontally back towards the angle of the jaw. I cut upon the scar, which was very apparent, but had some little difficulty in detaching the end of the pipe, as the scar had probably sunk into its hollow; this done, however, it was easily drawn out with dressing forceps, like a dirk from its scabbard, and was evidently smeared with a mucoid secretion from the sides of the cavity which it had made for itself. In a few days the effects of the operation ceased: he opened his mouth freely and without pain, *and the sinus filled* up.—*Notes to the Translation of Chelius*, Part xii.

ON THE

URINE, BLOOD, AND DROPS
FLUID, IN MORBUS BRIGH

By Dr. Heller*.

Heller has latterly been bestowin
siderable attention to the pathologie
racter of the animal fluids in Bright's
and has published a long paper contain
results of his researches, which are i
points original, and on the whole offe
general account of what is at present
respecting the chemical and microscopi
racter of the blood, the urine, and the
sical fluid in this disease. The fol
account contains the substance of h
servations:—

The Urine.—In the progress of B
disease of the kidney, three stages
usually recognized, in each of whi
urine undergoes, in a more or less
degree, certain peculiar changes.
first stage, which is that of congestio
fluid has a reddish colour, owing
presence of blood or of its colouring
nevertheless, provided the quantity of
is not large, the reaction of the fluid i
In the second or chronic stage of the d
the urine is paler, having a clay-yell
whey-like colour; whilst in the third
or that of dissolution (for it usually
just before death), the urine again co
blood, but is now highly alkaline,
moniacal, and foul-smelling; during
stage the dropsical fluid also has a
odour. In each of the three stage
secretion of urine is diminished; yet
sionally an increase in the quantity se
takes place, but this is of short dur
During the chronic stage the largest qu
is secreted, and the œdema also som
subsides; yet this is but temporary.
first and last stages the quantity se
is frequently very small, not exceed
few ounces in the twenty-four hours
generally contains a little blood.

In the first stage, the urine, which i
and turbid, deposits either a whitish
ment, leaving the fluid above clear and
blood-red colour, owing to the hæm
dissolved in it, or blood-corpuscles a
also in the sediment and colour it;
presence of blood corpuscles is by no
essential to the red colour of the urine,
is often due to the presence of hæmat
alone. The urine may be either
neutral, or even somewhat alkaline,
has a low specific gravity. In the s
stage, the urine, which is of a light y

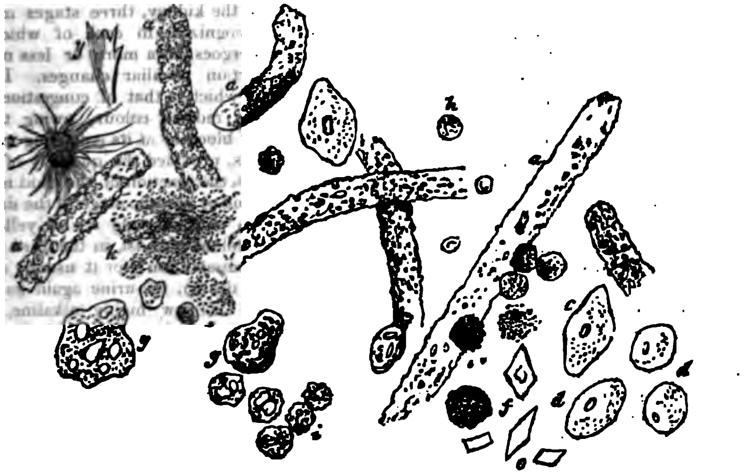
---

* Archiv. für physiol. und pathol. Chemi
Mikroscopie, vol. ii.

colour and turbid, deposits, in greater or less abundance, a brownish sediment, which shortly becomes paler in colour; the urine is at this time acid. Later on, the urine is frequently very pale, whey-like, and deposits a white, finely flocculent sediment. It becomes ammoniacal on standing, more rapidly than does the brown urine; its specific gravity is very low. In the last stage of the disease, the urine is of a deep red colour, contains more or less blood, whilst the sediment which it lets fall is red or reddish-brown, and contains many blood-corpuscles; it is either ammoniacal when voided, or rapidly becomes so when left at rest; its density is greater than in either of the preceding stages.

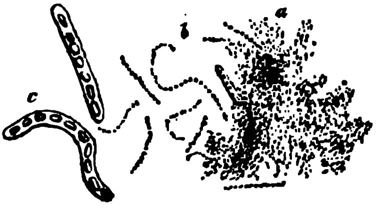
In studying the *microscopic* characters of the sediments which occur in the urine in this disease, the ingredients of which these sediments are composed may be divided into two classes, the first of which comprises those ingredients which are *constant*, being never absent in the urinary sediment in this disease; whilst the second contains the *occasional* ingredients, those, namely, which are only sometimes found in the sediment. The constant ingredients in the sediment are—First, ***Pavement-epithelium***: this occurs always in large quantities, and is especially abundant at the commencement of the disease, during which a copious white sediment often forms in the urine, composed almost entirely of pavement-epithelium. The cells of which the epithelium is composed usually differ somewhat from the normal form, being roundish oval, frequently almost round, with very distinct nuclei; occasionally the natural or more rhombic form occurs (fig. 1, *c*, *d*). Frequently the cells are peculiarly altered, being of considerable size, and containing two or three large nuclei and many smaller granules (fig. 1, *g*): they are also often shapeless, presenting membranous colourless shreds. Secondly, ***Epithelium from the tubes of Bellini***: this epithelium is usually present in the sediment in very small quantities at the commencement of the disease (during which period the pavement-epithelium is most abundant), though it does sometimes occur in large quantities even in the first stage. This variety of epithelium appears in the form of longer or shorter colourless canals, which are provided with yellow or yellowish-brown nuclei of various sizes. The more of these nuclei or granules there are, the darker do they appear. Fig. 1, *a*, represents these canals, with their granular contents, as seen when magnified 400 times. In examining a portion of *sediment for this* epithelium, *much care is requisite, since the* tubes frequently contain very few brown granules, especially at the commencement of the disease, and are, consequently, so fine and transparent that they are apt to be overlooked. Thirdly, ***Albuminous fungi*** (Albuminpilze): these formations occur in the urine of Bright's disease as well as in all other kinds of urine and of other fluids which contain albumen. They are often very distinct, especially if the urine is alkaline: they occur in heaps of various sizes (fig. 1, *k*), and appear, in their first formation, like strings of pearls (fig. 2, *a*, *b*). When highly magnified, their origin from cells is rendered manifest (fig. 2, *c*). When very abundant in the urine, this fluid has usually a strong musty odour. Similar formations are also found in the fæcal evacuations of typhus, and of other forms of diarrhœa. Fourthly, ***Mucous globules***: these are always present in greater or less abundance. Fifthly,

FIG. 1.



Granule-cells, or inflammation-globules (fig. 1, *f*): these are especially found in the stage of congestion; they are frequently of a light-brown colour, and often also colourless. Sixthly, *Fat-globules*: these are chiefly found in the chronic forms of the disease.

FIG. 2.



Of the *occasional* ingredients found in the urinary sediment in this disease are, first, *Crystals of uric acid*: they are mostly colourless, rhomboidal, or tubular (fig. 1, *e*); they occur even when the urine itself contains scarcely any traces of this acid. Secondly, *Urate of ammonia*: this occurs especially (though not exclusively) in the early stage of the disease. Thirdly, *Pus*: distinct pus-cells are sometimes seen in the latter stages of the disease; occasionally, also in the earlier stages. Fourthly, *Blue crystals of uroglaucin* (fig. 1, *y*, *z*): they are seldom found in fresh voided urine, but frequently when the urine has stood for some time; they are often indistinctly crystalline, appearing like smooth, always blue, masses under the microscope. Fifthly, *Crystals of the ammonio-phosphate of magnesia*: these frequently occur when the urine is alkaline, and when it contains therefore, sixthly, *Carbonate of ammonia.*

In *reaction*, the urine in this disease is almost always acid. Inasmuch as this acidity is often very strong, even though no uric or hippuric acids are present in the urine, and as the more acid the urine is, the more uroxanthin does it contain, Heller believes that the uroxanthin is the cause of the acidity. This is also probably the case in the urine of cholera. The presence of blood in the urine renders this fluid alkaline, though not if in small quantities only, such as is the case in the early stage of the disease; in the last stage the alkalinity is due also, in great measure, to the development of carbonate of ammonia.

The *specific gravity* of the urine in Bright's disease varies considerably, its amount depending on the degree to which the secretion of the urine is checked, on the quantity of albumen, and the quantity of blood present in it. In one case, Heller observed it to range from 1006 to 1048. In general the specific gravity is very low in the chronic stages. In order to judge of the actual specific gravity of the urinary secretion, the albumen or blood which it may contain should be coagulated by heat, and removed by filtering, previous to using the urinometer.

Of the various substances found in the urine in Bright's disease, and requiring some description, may be mentioned, first, *uroxanthin*. This substance occurs in solution as a yellow colouring-matter, and, as before stated, appears to be, either alone or together with uric acid, the cause of the acidity of the urine. It is invariably present in large quantity in the urine of this disease; consequently, the albumen, when precipitated by nitric acid or by boiling, assumes a violet colour, either immediately when thrown down, or after standing a short time. From this precipitated albumen, uroglaucin and urhodin may be obtained. Uroxanthin is also deposited with the sediment of the urine, especially if this fluid is alkaline.

Albumen is always present in the urine of Bright's disease, though its quantity varies considerably, sometimes there being scarcely a trace, whilst, at other times, even in the same case, the quantity is so large, that almost the whole urine becomes solidified on the addition of nitric acid. Towards the end of the disease the quantity is usually very small. In addition to what has been already said in regard to the presence of *blood* in the urine, it may be further observed that during the whole course of the disease, the urine, however pale it may be, contains a small quantity of hæmatosine dissolved in it; this is proved by the more or less brown colour which the albumen of the fluid has, when coagulated by boiling, separated, and slightly dried. Sometimes the albumen, before being dried, has a brigh rose-red tint. The hæmatosine may also be extracted from the coagulated and dried albumen by boiling it in alcohol, slightly acidulated in sulphuric acid. With regard to *urea*, this substance is always present in very small quantity in the urine in this disease; frequently there is but a trace of it. *Uric acid*, as was before said, occurs largely at the commencement of the disease, and exists either as such or as urate of ammonia. In the second and last stage it is usually either altogether absent, or is found in very trifling quantity. The *extractive matters* of the urine in this disease offer nothing peculiar. The *salts* are considerably diminished, both in their total number and in the quantities of each. This diminution is less marked at the commencement of the disease, but becomes more and more manifest as the disease progresses; frequently these ingredients are reduced to the smallest possible quantity. The chloride of sodium experiences the greatest diminution, being sometimes entirely absent. Next to th the earthy phosphates are most diminished, then the phosphate of soda, whilst th sulphates suffer very little diminution in their quantity.

The blood.—The general character of the blood in this disease may be briefly stated as follows:—Its density is considerably diminished, owing to the abstraction of a large quantity of albumen; the salts and other solid ingredients remaining almost, if not entirely, unchanged. It has a normal aspect, coagulates perfectly, and separates into clot and serum; the former of which presents nothing unusual. The serum is pale-coloured, and, owing to its deficiency in albumen, has a specific gravity much below the natural standard; it contains urea in very large quantity; is quite free from bile-colouring matter. There is nothing abnormal in the quantity of fibrine or blood corpuscles. The chief peculiarities of the blood in this disease therefore are—its low specific gravity, dependent on a diminished quantity of albumen, together with the presence of a large quantity of urea. The presence of urea in the blood is not, however, to be regarded as a condition peculiar to Bright's disease alone, for in cholera, and in ischuria generally, where the excretion of urine appears suppressed, it has been found in the blood in large quantities.

The dropsical fluid. — When carefully collected, the fluid of renal dropsy appears usually as a whey-like or pale-yellow fluid, having an alkaline reaction and a low specific gravity;—it always contains albumen, although in a very small quantity, by which circumstance it may be generally distinguished from the fluid of other forms of dropsy, in which the quantity of albumen is usually large. It never contains the colouring matter of bile, which, however, is frequently found very largely in other dropsical fluids, especially in the fluid of ascites. When allowed to remain at rest for some time, the fluid often lets fall a little fibrine, in the form of a loose, gelatinous coagulum. In the small quantity of albumen which the fluid in this form of dropsy possesses, is found an explanation of the foul odour which is frequently noticed in this fluid, and which is caused by sulphuretted and phosphuretted hydrogen, generated through decomposition of the albumen, which contains sulphur and phosphorus among its elementary ingredients. It was noticed by Heller, that the smaller the quantity of albumen which a fluid contains, the more easily does its decompostion take place, and the sooner, therefore, does the putrid odour commence. Consequently, in other dropsical fluids, the foul odour does not so readily occur, for these fluids always contain a concentrated solution of albumen. Soda-soap (natronseife), as well as non-saponifiable fat, especially the former, always occur in the dropsical fluid in Bright's disease. These, with the *epithelial* particles, give to the fluid a milky opaline appearance. Salts invariably form essential ingredients in the dropsical fluid of this disease. Their total number is very large. Chloride of sodium is somewhat predominant over the rest;—this salt occurs also very largely in the fluid of other forms of dropsy. The salts which are found in the dropsical fluid are, therefore, those which are wanting in the urine; instead of being retained in the blood when not secreted with the urine, they pass out with the fluid of dropsy.

It appears, therefore, from what has been said, that the contents of the urine, of the blood, and of the dropsical fluid, in this disease, bear to each other a certain definite relation. For example, the water which ought to be discharged in the form of urine passes out in the form of dropsical fluid, and is not retained in the blood; the albumen which is deficient in the blood, is found largely in the urine, scarcely at all in the dropsical fluid; whilst the salts which are wanting in the urine are found entirely in the dropsical fluid, none of those which ought to have been secreted with the urine being retained in the blood.

ON THE ABSORPTION AND ELIMINATION OF ALCOHOLIC LIQUIDS.

In a memoir lately presented to the Academy of Medicine by MM. Bouchardat and Sandras, the authors state, that alcoholic liquids undergo no other change in the alimentary canal than that of becoming diluted by the mucus, saliva, and liquids used as food. The absorption of alcoholic liquids takes place, as M. Magendie long ago pointed out, by the orifices of the veins, and is carried on chiefly in the stomach. When these liquids are swallowed in very large excess, or mixed with sugar, absorption goes on through the whole of the intestinal canal. The lacteals take no share in this absorption. If the alcoholic liquids have been taken with fatty substances, the quantity of chyle may be increased, but alcohol is never found in it. These liquids are introduced directly into the circulation, but alcohol is not eliminated by any of the secretory organs; a small portion only escapes by the lungs, and may be collected in the gases and vapours expired from these organs. If the quantity of alcohol thus introduced into the circulation be too great, the arterial blood retains the colour of venous, and may give rise to asphyxia. Under the continual introduction of oxygen into the lungs alcohol may be directly transformed into water and carbonic acid; but in some experiments the intermediate product of conversion, *acetic acid*, was obtained. Alcohol, and the products derived from it, disappear rapidly from the system.—*Comptes Rendus.*

Original Communications.

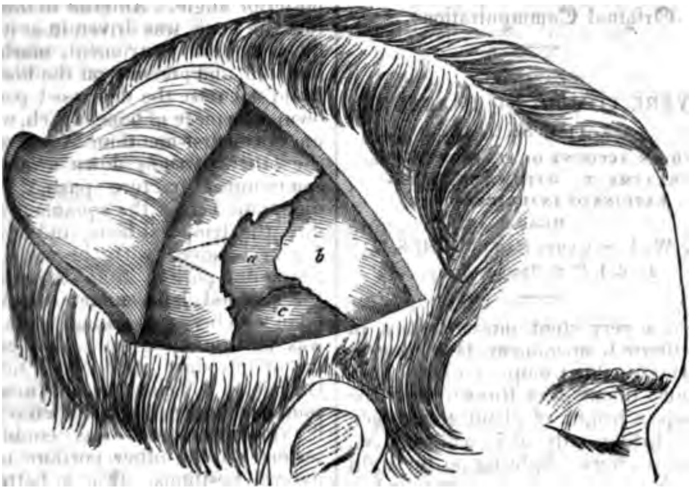
A CASE OF
SEVERE COMPOUND FRACTURE OF THE SKULL,
AND AN ACCOUNT OF ITS SUCCESSFUL TREATMENT: WITH SOME OBSERVATIONS ON INJURIES TO THE HEAD.

By W. J. Stuart, Esq. M.R.C.S.L.
H. E. I. C. S. Bombay Army.

C. N., a very stout muscular boy, of a plethoric temperament, belonging to the Honourable Company's Brig Taptee, off Calicut, was thrown from the foretop, a height of about thirty feet, while furling sails, at 7½ o'clock, A.M., on to the deck, alighting on the right side of his head and right arm: when picked up was quite sensible, complaining of pain in the head, from which there was slight hæmorrhage, owing to a small wound in the scalp just above the right ear. In a few minutes, however, he was seized with severe fits of an epileptic character, but soon became perfectly comatose: he was taken below, and a mild stimulant administered. I saw him about three quarters of an hour after the accident occurred, and found him suffering from all the symptoms of compression; breathing stertorous; foaming at the mouth; both pupils dilated, and not obedient to the action of strongest light; perfectly insensible; pulse full, labouring, incompressible; veins of face and neck turgid. I immediately ordered him to be bled from the arm. On examining the head found much tumefaction of right side, with a small wound above and behind the right ear; on probing which, discovered an extensive comminuted fracture, with depression. Finding the bleeding produced no relief after the abstraction of sixteen ounces, I determined to operate. Having placed him on some boxes, with his head everted to the left side, I made a triangular flap; its apex being anteriorly and inferiorly, its base posteriorly and superiorly; the incisions commencing with the opening in the scalp. Having thrown back the flap, I found an extensive fracture, extending from just behind the centre of ossification of the parietal bone down to its inferior and posterior angle. Anterior to this fracture the bone was driven in as it were by some blunt instrument, much comminuted, and pressing on the brain. I could not raise the depressed portions, owing to a piece of bone, which, wedged under the first-mentioned fracture, held the other portions down firmly: the comminuted fracture passed in two directions across the squamous suture into the temporal bone, and upwards. I now removed with the saw a small triangular portion from that part of the parietal bone under which the bone which was pressing on the brain was so firmly wedged; this enabled me to introduce an elevator under it. On raising it, being fractured nearly all round, it snapped off; I then removed it altogether, and was enabled to restore all the other portions to their natural positions. (For a better idea of the fracture and portions removed I refer to the accompanying plate, for which I am obliged to the kindness of Mr. A. D. Taylor, of the Indian Navy, and to Lieut. C. W. Montrow, who was of great assistance to me during the operation.) Immediately the depressed bone was raised the boy became perfectly sensible: the membranes of the brain did not appear injured in the least, and the brain pulsated naturally: rising level with opening, there was slight hæmorrhage at first from a small branch of the temporal artery, which was divided, but this soon ceased, and from under the cranium, when the depressed bone was raised. Having carefully sponged the surface of the skull and scalp, that no extraneous matter might be left behind, and having passed a flattened probe round the edges of the bony opening to see that no spiculæ protruded downwards, I replaced the flap, keeping it in situ by a suture at its apex, and also midway below and above. He was now (9½, A.M.) placed in bed, with head elevated, and placed on the left side, and warm water dressing alone applied.

℞ Calomel, gr. x. ft. pulv. ℞ Tinct. Opii, ♏xxv.; Aquæ Menthæ, ℥iss. ft. haust. s. s.

On examining for any other injury, found both bones of right forearm fractured just above the wrist-joint: this I now reduced, applying a splint before and behind: the body was much bruised.



The above drawing will give a better idea of the fracture and the operation than any description; for which I am particularly obliged to Mr. A. D. Taylor, Midshipman, Indian Navy.

That portion of the cranium marked in the form of a triangle, with dotted lines, is the part I removed, to enable me to elevate the portion marked *a*, which I also removed, as stated before; this enabled me to raise and place in their natural positions those portions marked *b* and *c*.

I should state, that on examining the pupils of both eyes about a quarter of an hour after the operation, found them obedient to action of light; pulse, though full, was less labouring in its character; skin was hot, but moist; but now, though perfectly sensible when spoken to, was much convulsed, tossing his arms and legs about wildly, rendering it necessary to hold him firmly. I therefore ordered—

Venæ Sectio ad ℥xvj.

This lowered the pulse, which was now 140, and produced more quietude, though he still remained very restless.

11, A.M. :—

℞ Calomel, gr. x.; Antim. Pot. Tart. gr. ⅓ ft. pulv. ℞ Tinct. Opii, ♏xlv.; Aquæ, ℥iss. ft. haust. stat. sum. To have low diet.

12 at noon, somewhat inclined to dose, but awakes restless, and talking incoherently; is quite sensible when spoken to; skin moist; pulse 160, soft, small, and compressible. To have, at 2 P.M. :—

℞ Calomel, gr. vj.; Pulv. Antim. Co. gr. v. ft. pulv. ℞ Tinct. Hyoscyam. ♏xxx.; Mist. Camph. ℥iss. ft. haust.

5, P.M.—Since last report has been more quiet, and inclined to sleep; skin moist, though hotter; wound looking healthy; scalp very hot; is quite sensible; pupils sensible to action of light; has passed urine freely. Complains much of pain in head and arm; tongue moist; pulse 92, full, and rather labouring.

Venæ Sectio ad ℥xij. Repeat Haustus et Pulvis.

10 P.M.—Is sensible; skin moist and warm; very restless; pulse 94, and soft.

℞ Antim. Potass. Tart. gr. ⅓; Liq. Ammon. Acetatis, ʒiij.; Tinct. Hyoscyami, ♏xl.; Aquæ, ℥vj. M. ft. haust. s. sum.

March 19th, 2 A.M. — Continues restless, dosing for short intervals, and then starting up with a scream, or talking.

Repeat Haustus c. Pil. Colocynth. Co. gr. x.; Calomel, gr. v. M. ft. pil. ij. s. sum.

6 A.M.—Has been more quiet the last three hours; skin cooler, and moist; scalp cooler; wound looking healthy, with slight discharge; pupils natural; sensible when spoken to; rather drowsy; pulse 84, and soft; no relief to bowels at present; passes urine freely.

Repeat Pil. Colocynth. c. Calomel.

9 A.M.—Much the same; bowels not relieved.

℞ Infus. Sennæ, ℥ij.; Magnes. Sulph. ʒss.; Vin. Antim. ʒij. M. statim sum.

2 P.M.—Bowels have been freely relieved; stools very dark and offensive; continues restless, but sensible; skin cool and moist.

10 P.M.—More restless; talking wildly, but sensible when spoken to; pulse 96, and full, but compressible; scalp hot; skin warm; pupils natural; eyes preternaturally glistening.

℞ Calomel, gr. x.: Antim. Pot. Tart. gr. ¼. M. ft. pulv. ℞ Tinct. Opii, ♏xl.; Aquæ, ℥iss. ft. haust. s. sum.

March 20th.—Has been dosing a little, but is still very restless, and talking wildly; sensible only when spoken to; skin is moister than at last report, but his scalp still very hot; pulse 94, and full.

Repeat Calomel, gr. x.; Antim. Pot. Tart. gr. ¼. M. in pil. i. s. sum.

6 A.M.—Is much improved; scalp and skin cool and moist; quieter and sensible; tongue moist; pulse 84, soft, and regular; gums very slightly affected by the mercury; bowels have been twice freely relieved; passes urine freely; says he has very little pain in the head, and only across the forehead; arm painful; wound healthy; eyes natural.

℞ Magnes. Sulph. ʒvj.; Antim. Potass. Tart. gr. j.; Tinct. Hyoscyam. ʒiss. Aquæ, ℥vj.; M. Capt. uncium j. 3tis horis. Warm water dressing continued to the wound. Readjusted splints to arm.

10 A.M.—Going on very well; pulse 84, soft, and regular; bowels have again been relieved.

Continue.

9 P.M.—Progressing favourably, but complains of not being able to sleep.

Repeat Haust. Salin. c. Tinct. Hyoscyam. ♏xl. pro dosi.

March 21st, 6 A.M.—Bowels have been four times relieved during the night; has slept for about three hours; rather restless this morning; skin cool and moist; pulse 84, and soft; tongue moist, but furred; complains of slight pain in head near seat of injury, and in the arm; edges of wound looking healthy; discharge scanty, and of a dirty yellow colour; no puffiness: in fact, the flap is nearly united except near its base.

℞ Antim. Pot. Tart. gr. iss.; Liq. Ammon. Acet. ʒiij.; Aquæ, ℥iij. M. Capt. unciam j. 3tis horis.

9 A.M.—Somewhat better; more quiet; skin cool and moist; pulse soft and regular.

Cont. Medicament.

2 P.M.—Much the same.

Continue.

9 P.M.—Progressing favourably; bowels have been twice relieved; much calmer, and more quiet; pulse 88, soft and regular.

Repeat Haust. Salin. c. Tinct. Hyoscyam. ♏xxx. statim.

March 22d, 6 A.M.—Has had a quiet night, sleeping for two or three hours at a time; he awakes suddenly, starting and calling out at some one injuring him; is quite sensible; complains of slight dull pain in his forehead, and soreness at the seat of injury; flap is uniting fast; slight discharge of healthy pus; no puffiness; pupils natural; tongue moist and clean; skin moist and of natural temperature; pulse 80, soft and regular; arm painful; is now perfectly quiet; expresses himself as much more comfortable.

Cont. Mist. Salin. adde sing. dosibus Mag. Sulph. ʒj. doneo alvus respond. sum. Cont. warm water dressing. Barley gruel twice a day.

10 A.M.—Progressing favourably.

Continue.

9 P.M.—Bowels not yet relieved; otherwise progressing favourably.

Adde Haust. Salinæ Tinct. Hyoscyam. ♏xxx.

March 23d, 6 A.M.—Passed a quiet night, having had six hours sleep; bowels have been once freely relieved; skin cool and moist; pulse 80, soft and regular; tongue clean and moist; complains of slight giddiness, and pain in back of head; wound healing fast; slight discharge from base of incisions, where the edges of wound are rather separated; therefore brought them in contact with strips of adhesive plaster, and applied simple dressing; arm easier; says he is very comfortable.

Continue Mist. Salin. ter in die.

2 P. M.—Complains of slight increase of pain in head, otherwise much the same.

Continue.

9 P. M.—Pain in head increasing, especially across forehead; scalp hot; removed strapping and reapplied warm water dressing; no puffiness; edges of wound healthy, and discharging freely; pupils natural; tongue moist; mouth appears slightly drawn to left side; bowels twice relieved; pulse 88, full, but compressible; is sensible, but rather more restless; skin warmer, but moist.

℞ Calomel. gr. v.; Pulv. Jacobi, gr. iv. ft. pulv. j. stat. sumend. c. Haust. Salin.

March 24th, 6 A. M.—Passed a quiet night, sleeping an hour or two at a time, but awaking in starts; head less painful; scalp still rather hot; wound healing; discharge healthy; removed the sutures; skin generally moist; tongue moist; pulse 84, soft and regular; mouth less drawn.

Rep. Pil. c. Calomel. gr. v. et Pulv. Jacobi, gr. iv. stat. Cont. Mist. Salin. 4tis horis. Lotio Frigid. part. Ant. capit. applicand. Continue warm water dressing to wound.

1½ P. M.—Much better in all respects; bowels have been very freely relieved.

Cont. Misturæ.

6 P. M.—Progressing favourably.

Continue.

March 25th, 6 A. M.—Had rather a restless night from want of sleep, but was quite sensible, free from starting, very little pain in head, and confined to forehead; scalp cool; wound healing fast, and looking healthy; skin cool and moist; eyes and mouth both natural; pulse 80, soft and regular; arm easier.

Cont. Mist. Salin. ter in die.

11 A.M.—Much the same.

Continue.

9 P.M.—Progressing favourably.

℞ Tinct. Morphiæ Muriat. ♏xx.; Aquæ, ℥j. ft. haust. stat. sum.

March 26th, 6 A.M.—Had a good night's rest; scalp cool; no pain in head; occasional giddiness; wound nearly healed; eyes natural; tongue clean and moist; perspires freely; bowels open; pulse soft and natural; countenance natural; arm easy; very thirsty.

℞ Potass. Nitrat. ʒss.; Spirit. Æther. Nitric. ʒiss.; Aquæ, ℥viij. M. Coch. Mag. iij. ter in die sumend.

6 P.M.—Progressing favourably.

Rep. Haust. Morph. Mur. h. s. s.

March 27th, 6 A.M.—Had a restless night, not being able to sleep; no pain in head; scalp cool; wound healthy; tongue rather furred; pulse soft and natural; arm easy.

Cont. Mist. ℞ Pil. Colocynth Co. gr. x.; Calomel, gr. iij. ft. pil. ij. s. sumend.

6 P. M. — Progressing favourably; bowels open.

Continue.

March 28th, 3 P.M.—Had a good night's rest; no pain in head; tongue clean and moist; pulse soft and natural; bowels been twice relieved; skin cool.

Cont. Mist. ter in die. Omitt. Haust. Sedat. Readjusted splints. Spoon diet and pudding.

March 29th, 4 P.M.—Had a good night's rest, but complains of slight pain in head; the wound healthy, very nearly healed, and no puffiness; had a slight chill fit in the morning, and was crying a good deal; cannot say why, but is now quiet; skin cool and moist; tongue clean; pulse soft and regular.

Mist. Camph. ℥j. ter in die sum. ℞ Calomel, gr. vj.; Pulv. Jacobi, gr. v. h. s. s. Pulv. Jalap. Co. ʒss. ft. pulv. cras mane sumend.

March 30th, A.M.—Passed a quiet night; bowels have been freely acted upon; is free from pain, and going on well in all respects.

Continue.

March 31st.—Progressing favourably.

Continue.

April 2d.—Wound in scalp perfectly healed, and united over its whole surface; is progressing most favourably in all respects; removed splints from arm, and applied the gum bandage: bones uniting favourably.

Omit medicines.

April 6th.—Has been progressing

most favourably since last report; wishes for more to eat.

To have sago twice a day, with plain pudding.

9th. — Progressing favourably; re-applied gum bandage to arm; allowed him to sit up in bed.

Pulv. Jalap Co. ℈ij. ft. pulv. stat. sum.

13th.—Progressing most favourably; wound quite healed; can detect position from whence the portion of skull was removed, by pulsation of the brain being visible: says he is perfectly well.

17th.—Progressing most favourably.

To have full diet.

22d. — Is perfectly convalescent; appetite good, and getting stronger daily. I therefore made a stiff shield to protect the seat of injury in his head, with strips of calico, soaked in thick mucilage, kept *in situ* by a tight bandage; removed bandage from arm, the bones being firmly united, merely applying straps of soap plaster round seat of injury. On moving the fingers a crepitus is felt, just where flexor tendons pass under the annular ligament, probably from some bony callus being effused round them. Allowed him to get up, but to keep as quiet as possible.

The above case (from the severity of its nature, the train of symptoms which followed one another from the occurrence of the accident up to the termination of the operation, and afterwards until he became convalescent; as also the method of treatment which I adopted, which both in this, and a case of severe injury to the head, for a detail of which I refer to No. 5 of the new series, LONDON MEDICAL GAZETTE, has been so successful), is, I consider, of so interesting a nature as to justify my making a few observations upon it, especially as these injuries are the most important in surgery, both in a practical and physiological point of view.

Beautifully as nature has protected the brain, the case which contains it cannot be seriously injured without prejudice to the organ it contains, which presiding as it does over both the mental and corporeal functions, renders any injury it may receive of vital importance; and the more important the organ injured, the more necessary is it to be well acquainted with the best mode of treatment, to prevent any injury it may receive impeding the due exercise of its functions.

It has long been a disputed point whether it is absolutely necessary to trephine in all cases of fracture of the cranium, even though there be depression; and from the accounts of several cases which have been related by various authors, in which this accident has occurred, and an active antiphlogistic treatment been adopted with perfect success, together with our knowledge of the hazard of interfering with so important an organ as the brain, one might feel justified in abstaining from operating, especially as we know how generally these cases terminate fatally afterwards.

Dr. Hennen states several cases in his work on Military Surgery, to prove the utility of not operating, but it is only in those cases where there is an absence of symptoms indicative of compression.

Mr. Guthrie also leans to the same idea; but he states most distinctly that, in these cases, the injury has occurred from a cutting instrument, or something similar; the patient only experiences a stunning sensation, and the inner table of the skull is probably sound, or at any rate not depressed.

Now we know that in consequence of the intermediate structure of the bony parietes of the head being cellular, the diploe as it is called, the external surface, may be driven into it, and all the appearances of depression exist without such being the case; here, however, we shall have an absence of severe symptoms, and the careful examination with a blunt flat probe will soon prove the extent of the injury; but when we find the inner table also fractured, depressed, and symptoms of compression existing, Mr. Guthrie is of opinion, and I fancy no one can think otherwise, that an operation, and an operation alone, can save the patient, as a portion of it may be driven into the dura mater, and even into the brain, which must materially interfere with its healthy movements.

There are cases in which the use of the trephine is justifiable even though there is an absence of symptoms; these cases are, however, rare, and we ought, when such is the case, to wait, even though portions of the inner table be depressed, and irritating the brain; for such cases have been relieved occasionally without an operation, and symptoms will eventually occur to indicate its necessity.

Again, no extent of injury to the skull, however great may be the depression, however severe be the symptoms, should prevent us from operating, if the functions of vegetative life are not so seriously interfered with as to make a fatal result inevitable.

From what I have now said, we may safely consider that when severe symptoms of compression and irritation of the brain exist, we are justified in operating; and that such did exist in the case I have related, cannot be doubted: the shortness of time which elapsed from the moment the accident occurred till the fits came on, is a proof of some cause of irritation to the brain and its membranes existing: he had never before had fits; these were of a purely epileptic nature, as were also the convulsive twitchings and spasms which he suffered for some time after the operation. What was the cause of these? Before the operation I believe they were produced by spiculæ of bone irritating the dura mater; afterwards, by inflammation of the membranes, which, irritating the hemispheric ganglion, produced not only the convulsions, but also that tendency to derangement of the intellect shown by his wild talking, and comparative insensibility, save when spoken to: these are the symptoms which are most to be dreaded, should therefore be watched for closely, treated energetically, and, if possible, anticipated by active depletive measures.

I consider that the derangement of intellect depends not so much on the extent of the injury to the skull and brain, as on the intensity of the compressing force: it is thus that incised wounds of the hemispheric ganglion do not at first affect the intellect so much as a compressing force, because the extent of surface which is injured is less in the former than in the latter, in the first instance, though, as soon as the blood is extravasated, and softening of the ganglion follows, then the senses are oppressed, and subsequently obliterated.

The state of both pupils was another important sign of the necessity for operating; as, if with a healthy eye in connection with a blow on the head, we find a dilated pupil, we have the sign of some pressure or injury to the optic nerve in its course within the skull, or the ganglia in which it terminates.

The extent of hæmorrhage should also be attended to, which in this case indicated much more serious injury than the small scalp wound could possibly account for; proving it must come from some internal source.

Besides these most important symptoms, we had complete insensibility, of an apoplectic nature, which, be it remembered, came on gradually after the fits, and continued to increase till I saw him, when no effort could rouse him; thus indicating most severe compression, the effects of which were gradually increasing in intensity, and unless some relief could speedily be afforded, must terminate in death: the stertorous breathing, foaming at the mouth, turgid face, and clammy skin, with a full incompressible pulse, were all additional symptoms to prove how severely the brain was irritated, and how much the mental and corporeal frame sympathised with the injury it had received.

Lastly, the use of the probe at once decided the case; it revealed the existence of a most severe comminuted fracture, with great depression, which no external examination with the finger could have fully detected, owing to the tumefaction of the external tissues, and when the scalp was turned back, the probe passing under the edges of the fracture indicated most clearly that the inner table was fractured, and several jagged edges were pressing down upon the membranes of the brain.

Having determined upon the necessity for operating, it may be asked what is the best method? I prefer the V shaped incision to any other, as, making it with the apex downwards as much as possible, you have a free exit for the discharge: again, I carry my incision so far as to take in the external wound, as this is sure to bring you down over the fracture, and enable you thus to make one external wound of it, thereby leaving less for nature to heal afterwards. Having exposed the fracture, and ascertained the necessity for removing a portion of the skull in order to enable you to elevate the depressed portion, I prefer doing so with Hey's saw, as a small triangular portion is generally sufficient for the purpose, and you can feel your way with that instrument better than with the trephine. The depressed portion having been raised, the good effect of the operation is generally at once shown, by comparative sensibility being at once restored, and never did I see so perfect a change produced as in this case; as, from a state of complete coma, my patient became instantaneously sensible, capable of answering questions, and in a quarter of an hour after, the pupils were both obedient to the action of light; no stronger proof than this can be wanting to show the utility of the operation, or how speedily the brain felt relieved from the removal of the cause of irritation. Ere I proceed to take notice of my after treatment, and the after symptoms, I would make a few remarks on the propriety of passing a probe under the edge of the opening in the skull, and on the appearance of the exposed dura mater.

With regard to passing the edge of the probe under the skull, though I am well aware that in doing so I may irritate, and produce some mischief by separating the dura mater from its internal surface, yet I cannot consider this to be equal to the dangers that would result from any spiculæ arising from fracture of the inner table still pressing upon, and irritating, the brain, which we know, from the structure of that table, and its liability to splinter, is not at all unlikely to be the case: if we left these spiculæ behind, our operation would be of no avail; I consider, therefore, that we are warranted in these cases (even in the absence of depression of the outer table, and the removal of the portions which are found at the edge of the opening made by the trephine or saw), in searching carefully for any farther portions that may have been separated.

As to the appearance of the exposed dura mater, it is interesting to enable us to decide whether blood or pus is effused beneath it, which might render an opening into it necessary." Now the dura mater, when exposed by the removal of a portion of the skull, will be seen to rise and fall with the pulsations of the brain, if it is not separated from the dura mater by anything else than the other investing membranes It is true that, in a tranquil state, and with a small opening, the motion is very slight.

The absence of this motion Mr. Guthrie states as diagnostic of fluid beneath. Now in the case I have related the motion was distinct, the dura mater appeared quite healthy; a slight hæmorrhage at first occurred when it was exposed; this soon ceased. I therefore considered this as a good sign, and as proving the utility of the operation.

The operation completed, I replaced the flap, and kept it *in situ* merely by three small sutures, to prevent, from retraction of the muscular fibres, the calvarium being exposed, and placing him in bed applied warm water dressing alone, instead of strapping or anything that could produce pressure, which of all things is to be avoided. The ill effects of such applications were shown, even several days after the operation, when, to expedite union, I applied them. I therefore consider the simple water dressing, keeping up as it does a healthy discharge and moisture, as the proper application.

With regard to the treatment, it may be asked, why did you bleed previous to the operation? Because, on my first seeing my patient, and finding him evidently suffering from severe symptoms of pressure on the brain, I considered it my first duty to relieve them, especially taking into consideration the state of the pulse, his being a very plethoric subject, and its being reported to me that he had not fallen on his head, but his loins: it was my conviction alone that the former was the case, which made me, in the first instance, examine it minutely, and finding what was the nature of the case (the bleeding which had gone on to the extent of sixteen ounces producing no effect), decided my mind on operating. In all these cases, and in fact in all cases of severe injury to the head, whether concussion alone has been the result, or compression with or without fracture has occurred, reaction having taken place, we ought to bleed, for I consider it to be our primary object, in all these cases, to anticipate the effects of so violent an injury to so important an organ, taking place as it does while the patient is in full health, by reducing the system as speedily as possible to such a state that inflammatory action may be wholly prevented, or if it does come on easily arrested, and this can only be done by active depletory measures, and the more active these are at first the less likely are we to have to use them afterwards; the patient's constitution will also suffer less by a direct sedative effect being produced upon the vascular system at once, than by having to repeat and repeat the use of such measures when symptoms have occurred: half measures are always bad.

Such being my opinion of the proper plan to be pursued, the course of treatment afterwards adopted will be accounted for; instead of, as is but too generally the case, giving him small and frequently repeated doses of mercury until the system is brought under its influence,—which small doses (especially in this country) but too generally excite the system than otherwise,—I ordered him larger doses at more lengthened intervals, believing as I do that calomel given in 10 to 15 grain doses exerts the most powerful sedative influence both on the vascular and nervous centres, especially when combined with tartarized antimony and opium; the former producing its more rapid absorption, and, when combined with opium, preventing its passing off by the bowels, and producing also determination to the skin: all these effects are also promoted by the abstraction of blood, especially if taken from a large orifice. The good effects of this treatment are distinctly shown in this case, as well as in my previous one; the convulsions which recurred soon after the operation, the wild incoherent talking, the extreme restlessness, were all indicative of a tendency to inflammation of the membranes, and consequent irritation of the hemispheric ganglion: yet how rapidly were these allayed: how quickly did complete sensibility return; how soon the pulse, from being full and incompressible, became soft and natural, after the following out of this treatment for only thirty-six hours; and when, a few days after, a contracted mouth, crying, increased restlessness, and twitchings of the muscular system came on, the system being now reduced to a state concomitant with the disease, how rapidly a smaller dose of calomel twice repeated produced a decided effect. Now, I lay particular stress on the use of these large doses of calomel at long intervals, instead of small ones at short, as I consider the same treatment is applicable to all disease in which the cerebrum and its membranes are affected, especially in the acute fevers of this country; for we can by this method at once arrest the active cerebral symptoms, the liability to local congestions, and that without the exhausting effects, and long convalescence, with liability to chronic diarrhœa and dysentery, which too often result from the use of small and frequently repeated doses: neither do we have so severe a mercurial effect produced,—that is to say, the system does not become so impregnated with mercury, for a few larger doses produce a more decided an effect (by their direct sedative action) in arresting active inflammatory symptoms, than double the quantity given in smaller doses, each of which only excites the system and eventually produces vascular, intestinal, and other morbid irritations: we want in these cases the sedative action of mercury alone. I can speak more positively on the benefit of this treatment in the fevers of this country, when combined with cerebral symptoms of a sthenic nature, from having seen both systems fully carried out: with the small doses, when a cure has taken place, I have in the majority of instances seen a long convalescence accompanied by exhausting irritation of the bowels; often long-continued typhoid symptoms. With the large doses, the acute symptoms have been rapidly relieved, the system has been much less, or not at all specifically affected by the mercury, and the convalescence has been short, owing to the corporeal strength having been less impaired.

The good effects of the anticipatory plan of treatment are decidedly shown both in this case and in the one I attended last year, in which precisely the same treatment was pursued, the same tendency to inflammatory action shown, its speedy arrest proved, and that with a short convalescence, and little or no effect produced constitutionally on my patient.

There is another important point to be alluded to in these cases, and that is, free and active purgation: by keeping up action of the bowels we get rid of any cause of irritation which might affect the cerebrum sympathetically, and by determining action to them, we relieve vascular excitement in the cerebrum.

It will be noticed that very slight pain was ever mentioned by my patient as affecting the part of the cerebrum where the injury occurred, but always the forehead: this I believe to have been the effect of the contre-coup, from which the brain as frequently suffers as from the direct blow: and I have no doubt but that the force with which the anterior lobes of the brain were driven against the frontal bone by the shock of the blow was the cause of the pain in the forehead.

In conclusion I would observe, that venesection of an active character, combined with the administration of large doses of calomel, with or without tartarized antimony and opium (I prefer the combination) at lengthened intervals, (and it will not be required generally to repeat it above three or four times), is the proper treatment to be pursued after such severe injuries to the cerebral system, as anticipatory of more dangerous symptoms occurring, which if they should afterwards take place can then be easily managed; active purgation, a low diet, and strict rest, is all that is required in addition. Having produced a decided effect on the system we can always keep it up by salines and antimonials: the local treatment consists in the most simple applications; warm water dressing, and cold to the head generally, if heat of the scalp and pain occur.

Should suppuration occur under the membranes of the brain, the skull, or scalp, after the operation, as indicated by puffiness over its seat, local pain, and perhaps rigors, with symptoms of compression or irritation, I should immediately make an incision down to its seat, and relieve it, as the only chance for my patient's recovery.

INCREASE OF INSANITY IN FRANCE.

It is reported in a late number of the *Gazette Médicale*, that cases of insanity have lately increased considerably in Paris. At the Salpétrière, under the high temperature which has prevailed during the summer, all the female patients have passed from a tranquil to a furious state of insanity.—See Vol. xxxvii. p. 1105.

OBSERVATIONS ON CHOLERA.

By J. G. French, Esq.

Surgeon to St. James's Infirmary.

The present state of knowledge on the subject of cholera may be said to be represented by the article in Dr. Copland's Dictionary, recently published; and when we consider the learning and ability displayed by the article itself, and that this is a source of information likely to guide so many who seek instruction on this subject, it is well worth while to examine Dr. Copland's view of the nature of the disease. Dr. Copland states that paralysis of the *lungs* is essentially the disease, and proposes the name of Pestilential Asphyxy for it. If asphyxia is to be regarded as a state of suspended animation from a primary arrest of the respiratory process, the other functions being thereby abolished, it does not seem easy to understand how this state can exist in cholera, for the following reasons. In asphyxia, as I understand it, the action of the heart does not cease before the functions of the lungs and brain are abolished. In cholera, the functions of breathing and thinking, without circulation of the blood, are performed to an extent which the general principles of physiology would not permit us to believe, but for the illustration of the fact which this disease affords.

We do not hear of the *cold breath* of the asphyxiated, although this is a symptom so remarkable in cholera, and which clearly shows the readiness of the lungs to perform their duty when the heart is no longer capable of doing that which is naturally assigned to it.

Magendie* was so much struck with the amount of mental power displayed by cholera patients in whom the circulation had ceased, and whose blood-vessels contained only black blood, that he declared all his previous convictions, (derived among other sources from the study of asphyxia,) were proved to be erroneous by this fact alone.

Again, the recumbent posture is better borne by the cholera patient than is consistent with the hypothesis of asphyxia.

---

* Leçons Orales.

It is singular that a disease so important, and which has attracted so much attention, should be still so little understood in its nature that the very mode in which recovery takes place is generally wholly unknown.

The plan of treatment generally adopted and recommended by Dr. Copland, is, in my opinion, so injudicious, that it may be compared to that kind of surgical practice which should consist in constantly sponging away lymph from an incised wound, or pus from a granulating surface.

The treatment of cholera, indeed, however injudicious, will not prevent a considerable number of patients recovering from this disease; so much so, that each practitioner pursuing any mode of treatment whatever will congratulate himself on his extraordinary success. So it was with the physicians of a former day in the treatment of small-pox by stimulants and close rooms.

Whatever remedies are to be resorted to, let us, at least, inquire into the natural mode in which recovery takes place from the most frightful collapse.

Take the example of a patient who has gone to bed well, without preliminary diarrhœa. He is roused early in the morning with a violent purging, and in two hours his voice is whispering, his pulse imperceptible. His motions, which have been almost incredible in quantity, resemble rice-water: the surface is cold and clammy. Such a patient has frequently a rapid convalescence.

What are the circumstances that uniformly attend it? According to my observation they are these:—Violent cramps; intense thirst, with a strong predilection for cold water to drink; gradual cessation of the diarrhœa; and long-continued vomiting.

These phenomena form a process for the restoration of a patient from the stage of collapse which are as requisite as is the process of adhesion or granulation for the reparation of wounds.

So strong, indeed, are the convictions in favour of what has been so long preconceived on the subject, that in order to show the extraordinary effect of what I must be permitted to call prejudice on the mind, I will quote the case and opinions of Mr. Searle.

Mr. Searle was attacked with the disease in India. He has since written a book on the subject, in which he publishes his own case. He states that his case was recorded, while it was fresh on the mind, by his apprentice. After describing some of the symptoms of the disease which he experienced, he says, "I now took half a glass of brandy, with double the quantity of hot water; although a little wind was expelled from the stomach, it afforded no relief to the præcordial oppression*.

Mr. S. was attacked at 1 A.M. He took the dose just mentioned of brandy and water, which afforded no relief, and also ten grains of carbonate of ammonia, which "did not afford any relief to the præcordial oppression, though hot flannels had been constantly applied." At half-past 3, "there was thirst, with desire for cold drink;" a wine-glassful of cold water was taken, and repeated every half hour with great comfort. The cold water for drink, and the constant use of the punkah, were continued till 6 A.M., with progressive relief to the præcordial oppression." At 9 A.M. some tea was taken, which distressed him for a couple of hours. He then returned to the cold water, taking a larger glass ad libitum. At 4 P.M. he took some broth, "but the feelings were that it had better been omitted; an occasional wine-glassful of water only has therefore since been taken," &c. Convalescence was rapid.

Thus, then, we find the following facts:—A man with cholera, capable of judging of his condition and the effect of remedies, takes brandy and water, finds no relief; ammonia, no relief; cold water, "great comfort," and "progressive relief;" tea, turns sour; returns to cold water; a little broth, it had better be left alone; restricts himself to cold water, and gets well. Yet this gentleman, sitting in judgment on all other patients, condemns them to "brandy and water, mulled wine, ether, ammonia, every quarter of an hour."

This is one of the authorities quoted by Dr. Copland in support of the stimulating plan of treatment which he recommends.

It is only by a process of careful induction that an accurate knowledge of any disease can be acquired. The careful study of all its phenomena has taught me to regard cholera as one of the simplest forms of acute disease. If the tendency of disease be death, surely no disease whatever has more quickly produced that result than cholera.

---

* Searle on Cholera, p. 37.

In contending that asphyxia is not the condition of the patient in cholera, I have adverted to the fact that the heart itself is very obviously deprived of its power; and I venture to assert that this loss of power is, beyond all comparison, the most striking lesion, and that upon it all the phenomena of the disease admit of explanation. It explains the sudden death, the diarrhœa, the vomiting, the cramps, the suppression of the bile and urine, and even the diuresis, which, on the authority of Dr. Graves, of Dublin, was observed to be prevalent among the attendants of cholera hospitals.

Before entering upon the consideration of the treatment of a disease which consists in the diminution or arrest of the heart's action,—or, to apply a technical term to express this, namely, paralysis of the heart,—let us see if analogy will assist us.

There is an affection produced by the operation of lead called "dropped hand." The quickest mode of curing this form of paralysis is to place the hand and arm upon a splint, and in a sling, and at the end of three weeks the power of the limb is found to be regained.

All the other modes of treatment which I have witnessed appear to have retarded, if they did not prevent, recovery: in one case a moxa was applied, in addition to every variety of stimulant, without any benefit whatever at the end of five weeks after the occurrence of the complaint; yet this case, after complete rest for a month, yielded, and the limb became restored. Now, if we have failed to discover an antidote to a substance so well known in chemistry as lead, and if all we can do to remedy a partial paralysis produced by this substance is to wait patiently until it ceases to exert an influence upon the nerves, and to husband the power of the limb by keeping it in a state of rest, not permitting the returning power to become exhausted, how should we expect to find an antidote for cholera, the nature of which poison is unknown to us? The source of fallacy in adopting the stimulating plan in these cases appears to me to have arisen from the circumstance of benefit having been derived from stimulants in some nervous weaknesses uncomplicated with the poisonous effects of lead, and the good effects of diffusible stimuli in cases of syncope or debility, where no poison exists to control the action of the heart.

That the action of the heart is really greatly depressed in cholera is admitted by all who have attended to the subject; and if the removal of the cause of this depression be out of our power, what are the most favourable compensating physiological conditions for the patient? The blood is a fluid intended by nature to be constantly circulated, and the evils of congestion and a true asphyxia would soon result from a loss of power of the heart, if no compensating means existed in the system for remedying this evil when it occurs in a greater or less degree.

If the blood is to remain stagnant in the vessels, the less fluid it is in its consistence the better. If the blood, therefore, cannot be circulated, the best thing that can happen is that the serous or fluid portion of it should be carried away in proportion to the degree of its stagnation.

This, then, appears to me to be the explanation of the profuse discharges which take place in cholera; this is the reason for the alteration in the relative constituents of the blood.

We admire the ingenious contrivance of the governor of a steam-engine—the valve of which opens exactly in proportion to the exigencies of the machine, and we should not expect to find less perfect contrivances in the animal economy. The degree to which these symptoms extend is exactly in proportion to the force with which the heart is controlled. The attack may be so severe that the patient dies without discharges at all, or it may be so mild that the diuresis (observed by Dr. Graves) may be sufficient for the relief of the patient. If, however, there be a state of collapse, in which the pulse is scarcely or not at all perceptible, the system remarkably drained of its fluids, and the blood in that tar-like condition which is so well known to exist in this disease, then, if there be thirst, and the patient drink freely of cold water, a rational expectation may be formed that the circulation of the blood will be gradually restored to its natural vigour in the following manner:—1stly, By the vigorous muscular pressure of *cramps*, which propels the tarry blood towards the heart. 2dly, By absorption of water into the blood-vessels, which has a direct tendency to restore the blood to its natural or liquid condition. 3dly, By nausea, which produces a general relaxation of the system; hence diminishing the obstruction to the passage of the blood in the vessels. 4thly, By retching or vomiting, which mechanically assists in driving forward the blood in the congested vessels.

These views were published by the writer in 1832*, and more fully in 1835†, but it was not until 1842 that he published a paper on the subject of the cramps in cholera.‡ As the surgeon to a large metropolitan parish he cannot be supposed to be without opportunities of rendering himself familiar with the complaint of which he writes. But it was in 1832, when, as surgeon to a parochial cholera hospital, his whole time and attention were devoted to the study of the disease, that his views and opinions were principally formed. Subsequent experience based on the results of treatment has convinced him of their truth.

The length to which this paper has already extended precludes the writer from attempting to do more than state the *principles* on which the process of reaction from the stage of collapse is to be conducted. On which subject he will only add, that the *feelings of the patient* with regard to temperature should be strictly attended to; it is most unwise to subject him to a disagreeable degree of heat, as has been so commonly done.

41, Great Marlborough Street,
August 1846.

---

[*] Letter to the Central Board of Health, 1832. Rivington.

[†] Nature of Cholera investigated, 1835, Rivington.

[‡] Lancet, Sept. 1842.

MEDICAL GAZETTE.

FRIDAY, AUG. 21, 1846.

A MEASURE of some importance to the profession is now before Parliament, and has already reached a second reading in the House of Commons. We allude to the Bill introduced by Mr. Wakley and Mr. Warburton, for the registration of medical practitioners in Great Britain and Ireland. We may look upon this as the first instalment of medical reform; and in our opinion it is a very proper beginning of those changes which we may hope will, at some future period, be made by the Legislature for the amelioration of the profession. We are not aware that any difference of opinion has existed in the great body of the profession, on the propriety or necessity of enrolling the names of all licensed practitioners in a register easily accessible to the public. An isolated measure of this kind, therefore, admits of a much more easy settlement than the cumbrous medical reform bills of the last session; nor is it open to the objection that it will preclude the necessity for future legislation, since it keeps clear of any attempt to invade the substantial rights and privileges of the Universities and Colleges. If there be any exception to this remark, it is in the alphabetical order of registration which it is proposed to adopt, whereby all distinctions of fellows, members, and licentiates, will, so far as the *public* register is concerned, be swept away. This plan will, however, render reference easy, and will enable the public, who are not aware of the precise nature of these artificial distinctions, to ascertain whether a person who styled himself a medical practitioner, be really licensed or not. This is the great,—we may say the only question, which really concerns the public. If more be required, the title and qualification will be found attached to the name in the register-book and certificate.

The Bill provides for the appointment of a Medical Registrar for England, Ireland, and Scotland, respectively, with a sufficient number of clerks and officers for carrying out its proposed objects. The absolute appointment of these officers rests with the Government, and their salaries are to be paid out of the registration fees. We presume, although we do not find it stated, that if any deficiency should occur under this head, the requisite sum will be paid by Government. It is probable, however, as the registration will be annual, according to the principle of the late medical reform bills, that a sufficient sum will be yearly levied by fees and fines, for the payment of all salaries and expenses.

The registration of the name, place of abode, testimonials of qualification, of duly licensed practitioners, may commence within thirty days after the appointment of the registrars. To entitle a person to registration, the diploma, certificate, or license, must be dated *prior to the passing of the Act*: and none are valid for this purpose, except those granted by a college or university, or body corporate, of Great Britain or Ireland. A separate declaration must be made by those who claim registration on the ground of having practised before the 1st of August, 1815. All practitioners who fall under these classes may claim to have their names, &c., registered without any fee whatsoever. They who became duly licensed practitioners only *after the passing of the Act*, are required to pay a fee of two pounds for registration.

The mere registration of the names of practitioners in a book, is not, however, the only object of the Act. Each registrar is empowered to issue, for the kingdom to which his appointment is limited, a *certificate*, to remain in force for a year only, to the effect that the applicant is a legally qualified practitioner (the nature of his qualification being stated); and that he is entitled to all the powers and privileges conferred by the Act. For this certificate a fee of *five shillings* is required to be paid by each registered practitioner, whatever may be his qualification; and after the 1st of January, 1847, he will be deprived of all privileges under the Act, unless he be in possession of this document.

The names of persons who have obtained *certificates* are to be printed in a separate register, in an alphabetical arrangement; and a printed copy of this register is to be received in all courts of law, as evidence that the person named has obtained a certificate according to the provisions of the Act. The absence of the name will be taken as evidence that no certificate has been obtained. Copies of these medical registers are to be supplied to applicants on the payment of one shilling for each copy. In order to provide against a disqualification from the accidental omission of names, or for incorrect description, it is provided, by clause 7, that on satisfactory proof of the omission or mistake, a certificate may be given by the registrar on the payment of a fee of twenty shillings; but the certificate will only continue in force until the first day of January then next ensuing. The wording of this clause leads us to infer that the mere changing of abode during the year will render it necessary to take out another certificate, with the payment of the fine just mentioned. We do not see why this provision should be necessary for the purposes of the Act, except to benefit the medical registration fund; for, provided a man could establish his identity, a mere changing of abode does not appear to us sufficient to render a fresh certificate necessary, or to justify the application of a fine.

Let us now look at the *privileges* conferred by the Act. No practitioner who is not possessed of a certificate can act as medical officer to any public institution, parochial union, or society, or in any medical capacity whatever, where a medical certificate or medical services are required by law. Any person acting or practising in an office for which he is not qualified according to the provisions of this act, is liable to a penalty of *twenty pounds*, recoverable by action of debt or information in the superior courts of Westminster. The possession of the Registrar's certificate, on the other hand, exempts practitioners from being summoned or serving on all juries and inquests whatsoever, and from serving in all corporate, parochial, or similar offices, and in the militia; and their names shall not be returned in any list of persons liable to serve in the militia, or in any such office aforesaid. But "no person shall be entitled to such exemption as aforesaid on the ground of being a physician, surgeon, or apothecary, who does not possess such certificate." In imitation of a similar provision in the Medical Reform Bills, it is provided, that if any registered practitioner be convicted of felony, or if it be proved before any competent court that he has procured a medical certificate under the act by any fraud or false pretence, or has given any false statement, evidence, or certificate, in any case in which by law such statement, &c. is required, his name shall be erased from the register; he will lose all his privileges as a registered practitioner, and he will not be entitled thereafter to obtain a certificate. A penalty of six months imprisonment, with or without hard labour, may be inflicted on those who obtain a certificate by false representations.

Such are the leading features of this measure. It will be seen from our summary, that, by the Bill, registration is made universal, and it may be said compulsory; for no practising member of the profession would like to subject himself to the disqualifications which would be entailed by his not possessing the requisite certificate. The disqualifying part of the Act, however, does not come into operation until the 1st of January, 1847, thus leaving sufficient time for reflection; but we do not see why practitioners should hesitate to register their names under an act of this kind. Should it pass, they will of course have no option. The registration involves a small annual charge, making in this respect no distinction of grades. We think the seventh clause, in reference to a fine for the omission of names, &c. might be a little modified without injury to the operation of the act. It is well known that there is a migratory class of practitioners, who seldom remain long in one spot: we do not see why they should not have the option of moving about to better themselves, without being made to pay what appears to be a disproportionate contribution to the registration fund.

The preliminary register will render it unnecessary to enter into very minute inquiries in granting a certificate. This document may be regarded as a kind of public diploma, available on all occasions, and intelligible to all persons, whether in or out of the profession. We think the eighth clause would be improved by a distinct provision that *all* evidence or depositions on medical subjects, before magistrates or coroners, should be received only from persons who possess this certificate. At present it is optional with those who receive such evidence or statements, to take them from whom they please; and although this practice may be met by a *valeant quantum*, yet we know that it creates a false impression on the public mind, and gives a false importance to the evidence of unqualified persons. To us the clause does not appear sufficiently clear on this point; for although, in the latter part, it speaks of "the certificate or evidence of any person not possessing a *certificate*" being received, yet its operation is restricted to those cases in which, by law or custom, "the certificate or evidence" of a practitioner is or shall be required. Now, unfortunately, the law does not interfere to debar non-professional persons from giving evidence under the circumstances stated; and it is of the custom, although not universal, of which we complain. The exemption from serving in parochial offices or in the militia, is clearly and properly defined by the ninth clause; and this is therefore calculated to remove a great deal of uneasiness which has lately been excited in the profession.

As we remarked in commencing this article, the act may be regarded as a fair commencement, on the part of the legislature, to improve and reorganise the medical profession. If no other benefit be derived from it, a well-defined and intelligible line will be drawn, for the first time, by law, between those who are duly licensed and those who are not. From the present divided state of the profession, and from the magnitude of many political questions now pending, it is doubtful whether more could be obtained from the legislature; and it certainly would be unreasonable to reject a fair in because we cannot at once pr that we desire.

STATE OF THE PUBLIC H IN THE METROPOLI

It is with great satisfaction nounce that the deaths regi the metropolis have consider creased in the week ending 15th; they amount to only 96 still above the summer, but o the annual average. In the p week the deaths were 1135. and sixth classes of diseases a the averages. In the first, o class, the deaths were 288; in ceding week they were 345! the diseases of this class are and diarrhœa. The followi will shew the great improveme has taken place in public he what little cause there has alarm :—

	Week endi	
Deaths from	Aug. 8.	A
Diarrhœa	195	
Cholera	37	

Of the 149 cases of diarrhœa, place under 15 years of age the 23 fatal cases of cholera, under this age.

As the subject of Asiatic ch though, we believe, rather sarily, has given rise to som sion during the last few week appeared to us that it would n of place to lay before our re excellent account of the prog mortality of this disease in 18 from the last part of Dr. C Dictionary of Practical Medic

---

* See page 341.

Reviews.

An Address to the Members of the Medical Profession on the Proposed National Institute of Medicine, &c. By T. H. Barker, M.B. 8vo. pp. 20. Bedford. 1846.

The object of the author of this address, is to show the position in which the Medical Reform question now stands, and to prove that the only plan left open for the reorganization of the profession is, that all of its members should join the New National Institute of Medicine, Surgery, and Midwifery. The subject is treated in a concise and logical manner; and even they who may not agree with the author in his conclusions, will at least admit that he states his views in very temperate language. The address opens with a short analysis of the four celebrated medical reform bills, now consigned to the tomb of all the Capulets; and it concludes with an account of the objects and advantages of the National Institute.

Dr. Barker believes that there will be no difficulty in procuring a charter of incorporation for the new Institute; and we must admit that if the objects proposed be fairly carried out, and unanimity exist among the members, these circumstances are likely to have a strong influence with the present ministers, and lead, at some future period, to a separate incorporation of the General Practitioners. The author says, and in our opinion truly enough, that there is now very little hope of a Supplemental Charter being procured by the Royal College of Surgeons. Nothing, we believe, will induce the Council of the College to apply for or procure a charter of this kind, except the immediate pressure of some strong Government measure likely to affect their interests. We have heard it said that there were legal difficulties in the way; but we regard this as a mere pretence. One Act of Parliament, in spite of legal difficulties, is made to amend another; and we do not see why a second Charter should not be equally made to amend what is wrong in one previously granted. It is not, however, our purpose to discuss this question at the present time. A Supplemental Charter may or may not be procured by the College, just according to the terms of the Charter which may be hereafter granted to the members of the National Institute. In the meantime, we commend Dr. Barker's pamphlet to the notice of those who wish to know what are the objects, and what are the benefits, likely to accrue from the incorporation of another estate in the profession.

Untersuchungen über die Textur und Function der Medulla Oblongata. Von Dr. B. Stilling. Erlangen. 1843.

Researches on the Structure and Functions of the Medulla Oblongata. By Dr. Stilling. 4to. pp. 62, with atlas.

This is the second part of a work on the nervous system, under the joint publication of Dr. Stilling and Dr. J. Wallach. The first part appeared in 1842, and contained the results of their investigations on the structure and functions of the spinal cord. The present treatise is devoted to the consideration of the structure and functions of the medulla oblongata, and contains, besides, a general summary of the conclusions to which the authors have been led, respecting the organization of the medulla oblongata and spinal cord. In the former part of their work an opinion was advanced by them, to the effect that no ganglion-globules exist in the gray matter of the spinal cord, and that what have hitherto been described as such are, nothing more than either the fragments of divided nerve-tubes, or angles and portions of blood-vessels. This statement, however, is here somewhat qualified; for the authors now admit the existence in the gray matter of the cord of a peculiar kind of globule, very similar to ganglion-globules, though differing from them in certain peculiarities of form. There seems no good reason, however, for regarding these bodies in any other light than as true nerve globules, exactly analogous to those found in the gray portions of the brain and in ganglia. Another assertion formerly made by the authors was, that the filaments of the roots of the spinal nerves are not, as is commonly supposed, continuous with the longitudinal fibres of the spinal cord, and do not therefore pass up into the brain, but that they unite with pale gray filaments which pass transversely through the substance of the cord.

The results of their further investigations have led the authors to confirm this statement, and to apply it to the roots not merely of spinal nerves, but also of the nerves arising from the medulla oblongata. It may be right to observe, that this view of the non-continuity of the roots of spinal nerves with the longitudinal filaments composing the chief substance of the cord, is by no means in accordance with the opinions of anatomists of the present day.

The part of the work before us consists of two main divisions, one of which treats of the structure, the other of the functions, of the medulla oblongata. The first portion is further subdivided into four chief sections, in each of which the structure of a particular part of the medulla oblongata is briefly described. This artificial division of the medulla into parts, for the purpose of description, tends to simplify the account of the whole. The best of the sections is the third, in which a good account is given of the origin of the vagus nerve.

Although there is a want of completeness in the mode of dealing with each separate subject of the book before us, which renders it in this respect, therefore, as well as in the clumsiness of the volume and comparative coarseness of the paper and type, much inferior to the beautiful and highly valuable works of Foville, Longet, and other late writers on the same subject, yet it may be regarded as one of the best monographs on this portion of the nervous system. Its value is much enhanced by the addition of some good engravings, which are said to have been executed by the aid of the Daguerreotype process.

The Mineral Waters of Kreuznach. By J. E. P. Prieger, M.D. Principal Physician of the Royal Hospital at Kreuznach. Translated by Oscar Prieger, M.D., and illustrated by Cases. 8vo. pp. 92. Churchill: London, 1846.

We confess that we feel some difficulty in dealing with Dr. Prieger's work according to its merits. In the generality of books written by Englishmen, there is no difficulty whatever in ascertaining whether certain peculiarities of expression and verbal errors are to be attributed merely to eccentricity of style on the part of the author, and carelessness on that of the printer, or to the writer's absolute want of acquaintance with medical phraseology; but in a work by a foreigner, it is less easy to decide. Had the volume before us been the production of an Englishman, we should not have hesitated to declare at once, that its author, although possessing some experience in disease, had not acquired the ordinary education of a medical man, and did not, in reality, possess a competent acquaintance with the subjects on which he writes. What other conclusion could be formed of a British medical writer who should speak of having observed that "the right ovarium was *enlarged to the size of a nut*, indurated, and painful to the touch; or describe that "in cases where the (ovarian) tumors had already attained a large size, he found a course of the waters internally and externally used, produced a softening of the interior of them, which became of a viscid tar-like consistence, and which was removed by easy and safe means, so that health was entirely restored (p. 52);" or who could write as follows. (It is necessary to mention, that the orthography in the following quotations is given precisely from the original.)

> "In swellings of the said" (uterine) 'organs (hyperamia), which mostly have their seat in the mucus membrane, and are commonly produced by tuberculous depositions, appearing principally in young subjects, from the age of puberty to the thirtieth year, and which are often met with in scrofulous disorganisations of the abdominal vessels and peritoneum, they are also frequently caused by too large menstrual secretion, or obstructions to the due circulation of the blood; and for this reason we find them also frequently joined with chronic diseases of the lungs, organic affections of heart, with chronic status, and its consequences in other organs—in the brain, liver, spleen, and especially in the rectum." (p. 49.)

We repeat, that such words and modes of expression as the above would be inexcusable in the work of an English physician; but we are willing to believe that Dr. Prieger is not chargeable with these errors; a work which, like his, has been written by a German, which is also translated by a foreigner, and which has certainly not been corrected for the press either by an English practitioner or a classical scholar, can scarcely fail to present numerous blemishes. We shall, therefore, pass over the medical descripions contained in this treatise, simply with the expression that, in their present form, they are not valuable.

The use, internally and externally, of he water of the "bromine and iodine springs" of Kreuznach, is strongly ecommended by the author in many ases of "Scrofula; Swellings and ndurations of the Glands of the bdomen; Diseases of the Female Breasts and Sexual Organs; Diseases f the Generative Organs of Man; honorrhœa Steatôma (a disease which, s described by Dr. Prieger, is altoether unknown to us); Diseases of he Prostate Gland and Urethra; Diseases of the Testicles; Disorganiations of the Corpus Cavernosum Urethra; Sand and Calculi in the Kidneys and Bladder; Diseases of the Bones and Joints; Gout and Hemorhoids; Rheumatism, Rachitis." They are also recommended in many forms of skin disease, and in several affecions of the respiratory organs; among which, "scrofulous and tubercular diseases" are the most prominent. The vapour of the waters is occasionally employed in diseases of the eye of strumous origin.

Dr. Prieger furnishes us with an extremely minute statement of the fractional proportions in which the following chemical substances are found in the Elizabeth Quelle,—the principal of the Kreuznach baths:—"Muriates of potass, soda, lithia, lime, and magnesia; bromide and iodide of soda (sodium ?), carbonates of magnesia, strontia and baryta; proto-carbonate of iron and manganese; alumina, silica."

"Besides these solid substances," adds the author, "we find carbonic acid in this spring, just sufficient to render it easily digestible (!), and not so much as to produce congestion of the lungs and head, as is sometimes occasioned by other mineral waters richer in that gas."

Practical Observations on the Use of Inspissated Ox-Gall in the Treatment of various Diseases; particularly those in connection with Derangement of the Digestive Function, Deficiency or Vitiated Secretions of Bile, Habitual Constipation, Habitual Diarrhœa, Indigestion, and other Results of Sedentary Employment. By CHARLES CLAY, M.D. To which is added a List of the Author's Communications to the Medical Journals. 8vo. pp. 16. London: S. Taylor. 1846.

MOST of our readers have had an opportunity of ascertaining the views of those gentlemen who have recently advocated the more extended use of inspissated and desiccated ox-gall, from a rather extended correspondence on the subject which appeared in the last volume of the GAZETTE; but, as the medicine really appears to be a safe, and in many cases an efficacious one, and as the introduction into general use of a new remedy, or the novel application of an old one, is seldom brought about until its merits have been advocated and reiterated in an infinite variety of ways, we shall present our readers with a few extracts from Dr. Clay's very interesting pamphlet.

Selection and Preparation of Ox-Gall. — As the author conceives that the unpleasant effects which have been occasionally produced by the administration of ox-gall have been mainly attributable either to the unhealthy condition of the animal from which the material was obtained, or to some error in the mode of preparing the article, the following remarks deserve particular attention.

"In the selection of ox-gall I am particularly attentive, and it is imperatively necessary, that great care should be exercised, otherwise its action cannot in the least be depended on. To accomplish this, I instruct the butcher to select me the gall-bladders from the *youngest oxen* that are presented for slaughter. The bladders and contents ought to have a perfectly healthy appearance, and to be of full average size, bearing in mind that, in the summer months, when the animals have a greater proportion of green food, the gall-bladders will be somewhat larger than in the winter months, when they exist on dry materials. It not unfrequently happens that these receptacles contain a great variety of morbid mixtures, which, if included, would form a preparation of the most nauseous and putrid character, producing a very contrary if not injurious effect, in lieu of the expected benefits of good healthy gall. Thickened mucus, purulent deposits, and calculous formations, are very frequent, and must be carefully guarded against as products of a diseased liver, on which account they cannot but be objectionable as a remedy. The gall I select is of an equal consistence throughout, transparent, of a gray-green colour, aromatic odour, and alkaline bitter taste. Having procured a sufficient quantity, I then pour it carefully off into a large flat dish (the larger the better, so as to allow full scope for evaporation), and place the vessel in an oven, with the door open to allow the moisture to pass off; in applying heat, care should be taken not to go beyond 96° or 97° Fahr. This heat should be continued until the substance has become a stiff mass, of the consistence fit for pills; indeed it should be so firm that it can with difficulty be rolled into pills. This being done, I preserve them in wheat-flour, and *not in magnesia*, as, during my early experience with this substance, I found after repeated trials that the preparation would not keep so well in magnesia; and also that a chemical action took place between the gall and magnesia, producing fermentation, causing the gall to become spongy and unfit for use, and totally altering its character. In wheat flour, kept in a close jar, or wide-mouthed bottle excluded from the air, the inspissated gall will keep very well for almost any length of time. * * * In one or two instances, when the evaporative process had been carried on too quickly, and the preparation had assumed the *desiccated* form, I found after repeated trials that this preparation was very inactive and uncertain —to such an extent, indeed, that I was invariably compelled to reject it as unfit for use."

Dr. Clay answers an objection which has been raised by Mr. Blanch, of Brixton,—that he found the inspissated gall to be an object of great disgust to parties taking it, and that he heard complaints of uneasy gripings in the bowels from its use,—by stating his conviction that Mr. Blanch did not pay proper attention to the selection and preparation of his formulæ; inasmuch as, if the gall be properly prepared, no such objections as he advances have ever been made by any one but himself.

"I can," observes the author, "easily conceive that ox-gall taken promiscuously from the butcher, and prepared without examination, would often produce all the effects described; butchers are in the habit of collecting the gall into large vessels for general sale, for other than medicinal uses; in these vessels all sorts are mixed, healthy and unhealthy, putrid and fresh; therefore it is found in every shade of decomposition, but still sufficiently good for the purposes to which it is intended to be applied, though not for medicinal uses."

In sending out the inspissated gall to patients, it will be found necessary to use small wide-mouthed bottles, such as are used for smelling salts, with the cork coated with wax.

The action of ox-gall is described by the author as peculiarly unique, for, while other remedies are found to have a direct or indirect effect upon particular organisms, and to a certain extent influencing their actions;—

"Ox-gall, on the contrary, appears to act, not on the system, but on the *material* intended to pass from the system, after having contributed all that is necessary to its support. It appears to be a purely chemical agent, having but a limited power of exciting any living tissue, but more directly active on the fæcal mass contained in the lower intestines."

In short, that in cases where the secretion of bile is deficient, the medicinal agent supplies the deficiency; and that in instances of unhealthy biliary secretion, where bowel irritation, diarrhœa, and other ill consequences are produced, the evil may be relieved by the introduction into the intestinal canal of the bile of a healthy animal. Ox-gall also has a peculiar power, when administered either in pills, or by enemata, of softening and dislodging hardened and impacted fæculent matter; it is also of value in counteracting the constipating effects of opium.

One of the author's principal arguments in advocating the use of ox-gall in cases of obstinate constipation, hepatic obstruction, absence of biliary secretion, chlorosis, chronic diarrhœa, dyspepsia, &c. is a statement of the fact it may be made to supersede the use of drastic and irritating purgatives, and that he has never found its use to be attended with griping or uneasiness in the bowels,—a recommendation which can certainly never be attached to any other really efficient cathartic or laxative medicine whatever.

Dr. Clay cites several cases illustrative of the application and effects of his remedy: among these are instances of external malignant disease, in which constipation was an annoying symptom, dyspepsia, constipation from the effects of lead, scirrhus, and other chronic organic affections of the liver, obstinate constipation attended with active gastric symptoms, constipation before and after labour, cases in which the remedy was used as a purgative previously to the operation of ovariotomy, the diarrhœa of phthisis (a class of cases in which we should feel indisposed to employ the remedy), obstinate chronic diarrhœa, complicated hysterical affections, and a few instances of dropsical disease where the remedy was employed as a diuretic. Some cases are also quoted which were sent to the author by Mr. Sleeman, of Bristol, in whose hands the remedy has not been particularly successful. Dr. Clay attributes its failure in these cases to the smallness of the doses which were prescribed. The doses in which the ox-gall is prescribed by Dr. Clay appear to be (for the adult) from 3 to 10 grains, three times a day.

Appended to the paper is a list of Dr. Clay's contributions to the medical periodicals: this portion of the pamphlet affords an ample field for judicious condensation.

On the Antidotal Treatment of the Epidemic Cholera. By John Parkin, M.D. 8vo. pp. 48. W. Allen, and S. Highley. London, 1846.

The reappearance of the epidemic cholera on the confines of Europe, and the general expectation which exists that it may again visit this country, has induced the author to prepare another and more condensed edition of the above work, the appearance of which some years since will probably be recollected by many in the profession. Since the publication of the former work, the author's views have received material confirmation, especially in the report of a commission appointed by the Royal Academy of Medicine and Surgery in Barcelona, respecting the results of the treatment recommended by him during the prevalence of the epidemic cholera in Spain. Among other statements, the commissioners mention that, under the ordinary plans of treatment—

> "Nearly all the patients that had the disease at all severely perished," but that in cases of true cholera, even when the stage of collapse has supervened, "the employment of carbonic acid gas produces wonderful effects." "This treatment," they add, "should be continued even in the state of complete and confirmed collapse, on account of its being the most efficacious and direct of all the plans that have been tried; and it is certain that, if it is used at the commencement, and the patients do not neglect to call the medical attendant after the disease has once manifested itself, there will be few who come to this state of atrophy and wretchedness."

As the practical bearings of this question are the most important, we shall be content with referring our readers to the physiological arguments on which the author grounds his belief that epidemic cholera depends upon the entrance into the system of some poisonous material, on which carbonic acid acts as an antidote,—and pass on to the evidences which he adduces in confirmation of his doctrine that the above remedy acts, by its antiseptic power, as a specific for the disease. Dr. Wilson, of Xeres, was induced, after seeing a notice respecting the beneficial effects of carbon (in the Medico-Chirurgical Review for 1833), to resort to this remedy in the severe and fatal irruption of the epidemic cholera in that part of Spain; and although himself induced to abandon the use of powdered charcoal, on account of the inconvenience of the remedy, was impressed with the firm conviction that "in all stages of the disease it is a most beneficial adjuvant; and *anterior to collapse*, and in the stage of reaction, most eminently curative." The author was informed by one of Dr. Wilson's assistants (we apprehend not a medical man), that he considered several thousands were cured by the administration of charcoal, as they had taken no other remedy. The evidence (adduced in the Appendix) of Dr. Gavardan, of Arras, Dr. Ardevol, and other physicians of Barcelona, Dr. Pascual, of Madrid, Mr. Radcliffe, Dr. Stevens, and others, is also more or less strongly confirmatory of the powerful effects of this remedy in the earlier stages of cholera, and of the benefit derivable from its administration during all periods of the disease.

The author has found that *carbonic acid gas* is not at all liable to the objections which attend the use of the simple carbon, while the effects witnessed are not only more apparent, but also more prompt and decided; this, Dr. Parkin adds, "will be evident by a reference to the results that have been *invariably* observed by myself after the exhibition of carbonic acid gas."

"When this remedy has been given, in those cases in which symptoms denoting derangement of the stomach are alone present, the effect of the medicine, according to my experience, has been to relieve the symptoms almost immediately. The nausea is speedily dissipated, the giddiness and faintness disappear, and the sense of burning and heat at the pit of the stomach is no longer felt or complained of, after two or three doses of the medicine. But the most remarkable circumstance is that which has attended the employment of the same agent during the stage of diarrhœa—that relaxation of the bowels which is, almost always, the precursor of the severe form of cholera. Of the numerous cases in which I have given the carbonic acid at this period, it has invariably arrested, with some few exceptions to be explained hereafter, the morbid process, at a longer period, it is true, but still at a regular and certain interval.

"Neither is the remedy less useful in what has been termed the evacuant or second stage of the disease, characterised by rice-water evacuations. In these cases, the irritability of the stomach is speedily relieved, and the vomiting ceases soon after the first, or, at most, the second dose of the medicine; while the relaxation of the bowels is also arrested with as great, if not greater, celerity than in the former instance.

"But it is in the commencement of collapse that the efficacy of the remedy is best observed, and its *modus operandi* the most apparent. Not only is the vomiting immediately arrested, as in the previous stage, but the thirst, heat, and burning sensation at the pit of the stomach, disappear almost as speedily. During a repetition of the medicine, the spasms, which generally prevail at this period, are effectually relieved; the evacuations from the bowels become less abundant and less frequent; the depression of the system is removed; and the other symptoms characteristic of this stage vanish by degrees, so as frequently to leave the patient comparatively free from all ailment, after the administration of only five or six doses of medicine. These remarkable and hitherto unexampled circumstances have frequently excited the attention and admiration of others, and are dwelt on, with peculiar emphasis, by Drs. Ardevol and Pascual, in the reports which are added in the Appendix. It now only remains to *ascertain the influence* which the remedy *exerts in the state of* confirmed collapse. When it has not been previously administered its employment at this period is not constantly followed by any sensible effect or beneficial result. This, however, is only what might and what ought to have been expected from the employment of such a remedy at such a period; there being several causes in operation, either of which would, it is probable, satisfactorily account for the failure observed in this instance," (pp. 18-20).

The author then proceeds to shew the reasons upon which the failure of the antidotal effects of the remedy at the advanced period of the disease probably depends. He does not, however, consider the gas to be totally inefficacious, even at this stage of the malady. The following is the mode in which the remedy is prepared by the author. Although perfectly simple, we think it right to give the formula in detail:—

"Thirty grains of the powdered carbonate, bicarbonate, or, as it is now termed, sesquicarbonate of soda, or potash, should be put into a large tumbler, with a wine glassful of water; to which is to be added a dessert spoonful of any simple syrup, mixing the two ingredients together so as to form a homogeneous mass. Then take twenty grains of citric, or tartaric, acid, and dissolve it in half a wine glassful of water, when the solution is to be poured on the contents of the tumbler, and the mixture drank off immediately, before the effervescence has subsided. If more convenient, or when to be obtained, lemon juice may be substituted for the citric, or tartaric acid, in the proportion of two tablespoonfuls of lemon juice to the same quantity [thirty grains] of soda or potash. As the object in giving the syrup is to render the mixture more tenacious, and to prevent the gas escaping so rapidly as would otherwise be the case, it is not necessary, when the lemon juice is used, to add any syrup," (p. 28).

Having now given a sketch of the author's principal statements with regard to the effects of this remedy, we beg to refer our readers to the details of the original pamphlet, specially to that portion of the work which treats of the mode in which the carbonic acid should be administered in the various stages of cholera, as well as under the several modifications which the symptoms may present in different constitutions. We have read the whole of Dr. Parkin's brochure with great interest, and strongly recommend the statements which it contains to the attention of our readers.

Selections from Journals.

PROGRESS OF CHOLERA.

II. **Progress and Mortality.** — i. *Progress.* Pestilential cholera first made its appearance in Jessore, a populous town in the centre of the Delta of the Ganges, and cut off the majority of those whom it attacked. It spread from the town in all directions, and reached Jaulnah, on the Madras side of the Indian peninsula, in June, 1818, and Bombay in August of the same year. It continued to spread and to prevail throughout all parts of India and the adjoining countries, and still prevails in many districts, although in various degrees of severity, and with intervals of complete immunity from its presence. Indeed, it may be said to have become naturalised in India, forming one of the diseases of the country.

During 1818, it visited, in an easterly direction, the Burmese empire, the kingdom of Arracan, and the peninsula of Malacca. In 1819, it appeared in the isle of Penang, in Sumatra, Singapore, the kingdom of Siam, Ceylon, and the isles of France and Bourbon. During 1820, it reached Tonquin, Cambogia, Cochin-China, Southern China, Canton, the Philippines, &c. In 1821, it visited Java, Bantam, Madura, Borneo, and numerous other places in the Indian Archipelago. In the years 1822, 1823, and 1824, it appeared at Tonquin, Pekin, Central and Northern China, the Moluccas, Amboyna, Macassar, Assam, and various other Eastern countries and islands. During 1827, it prevailed in Chinese Tartary. In all these countries and places its prevalence and fatality were unprecedented in medical history.

In July, 1821, it reached, in its western course, Muscat in Arabia, and, during the remainder of the year, visited various places in the Persian Gulf. In the following month it appeared in Persia, and during 1822 and 1823, 1829 and 1830, it prevailed in several of the principal cities of that empire. It broke out in Bussorah and Bagdad in July, 1821, and in 1822 and 1823 ravaged most of the populous cities of Mesopotamia, Syria, and Judea.

In 1822, it reached to within 150 miles of the Georgian frontiers of Russia, and in 1823 appeared at Orenburg and Astrachan, beyond which it seems not to have extended until August, 1828 and 1829, when it reappeared at Orenburg, the capital of the province of that name, situated on the Tartar frontier, about 400 miles north of the Caspian, and about 1000 miles north of the places where it prevailed extensively in 1822. Its prevalence and fatality in this province were great, upwards of a tenth of the inhabitants having been seized, and about a fourth part of those attacked having died of it. At the same time that the disease appeared in Orenburg, it was raging in several Persian provinces and Tartar tribes in Central Asia, from which it was supposed to have been introduced into Orenburg. At the commencement of 1830, the disease had entirely ceased in the Russian dominions; but, towards the beginning of autumn, it broke out with increased violence on the Georgian frontier of Persia, having appeared, in June, in the Persian province of Ghilan, on the southern shore of the Caspian, from the various southern ports of which it extended northwards along the westward Caspian shore until it reached Baku, Tiflis, Astrachan, and numerous other towns in its progress into the heart of the Russian empire. After attacking a number of places it has continued to spread westward and northward through Russia, Poland, Moldavia, and Austria; visiting Moscow, Warsaw, and other places in Poland, and extending, in May, 1831, to Riga and Dantzic, and in June and July to St. Petersburgh and Cronstadt; early in October to Berlin and Vienna, and subsequently to Hamburg, &c.

The distemper appeared for the second time in Astrachan near the end of July, 1830; and before the end of August, upwards of 4000 persons died of it in the city, and 21,270 in the province. After ascending the Volga it reached Moscow, became prevalent there at the end of September, and continued till February, 1831. It attacked about 9000 persons in this city, of which number more than one-half died. It reached Riga in the middle of May, and St. Petersburgh on the 26th of June. From Astrachan it extended to the northern coast of the Black Sea, and in the course of the rivers into the central parts of Russia. It reached Poland in January, 1831, followed the Russian army, in the subjugation of that country, and proved destructive in Warsaw and many other places, during April and May. At the end of the latter month it appeared in Dantzig. In June it prevailed in Lemberg, Cracow, and other adjoining parts, extending through Gallicia and Hungary, and reaching Berlin and Hamburg in August and September, and Vienna in the same months. It appeared at Smyrna in September, and soon afterwards in Constantinople. The pestilence was conveyed by a caravan from Mecca to Cairo in August, 1831, some thousands having died on the road, and by the middle of September, 10,400 Mahommedans, besides Jews and Christians, had died of it in this latter city.

Pestilential cholera appeared in England on the 26th of October, 1831, at *Sunderland*, a month afterwards at Newcastle-upon-Tyne, and in December at Hetton, Houghton-le-Spring, North Shields, Tynemouth, South Shields, Gateshead, and other places. The first cases reported in London occurred on the 13th or 14th of February, in the immediate vicinity of the shipping. In Scotland the pestilence first appeared at Haddington about Christmas, 1831, and in Leith and Edinburgh about the 22d of January following. Although instances were adduced of sailors belonging to ships which had arrived from Riga, Cronstadt, Hamburgh, and Dantzig, and on board which individuals had died of the malady on the passage, being those first affected at the seaports in the north of England, still there is every reason to believe, from the information given me by several captains of ships who had left these foreign ports during the period when the distemper was prevailing there, that the infection was conveyed to many places in both England and Scotland in the clothes and bedding belonging to sailors who had died either in these foreign ports, or on the passage of the ships back to this country, the clothes and bedding of the sick and dead having been preserved without any purification, and given up to the relatives.

From this country the pestilence was conveyed in an emigrant ship, across the Atlantic to Quebec, many of the emigrants having died of it on the passage. It appeared at Quebec on the 8th of June, 1832, and on the 10th at Montreal; and thence it extended to Kingston on Lake Ontario and all the surrounding parts. New York was attacked by it on the 24th of June, and Albany on the 3d of July. About the middle and end of July it spread to Newcastle on the Delaware, to Philadelphia and several other cities, and thence to nearly all North and South America. It appeared at the Havannah in February, 1833.

The pestilence appeared at Calais on the 12th of March, and was believed to have been brought from England. On the 26th it broke out in Paris, where it carried off about 20,000 persons by the end of September, no precautions having been taken to prevent its extension, a general belief of its non-infectious nature having been erroneously entertained. During 1833 and the early part of 1834 it raged throughout Spain, and was very destructive in Madrid. It visited several parts bordering on the Mediterranean in 1834; and reappeared in London and in some other places in this country, as well as in North America, in the same year. It was most destructive in Rome in 1837, the number of deaths varyng, for many days, from 200 to 300 daily. t spread to various other countries not mentioned in this brief sketch, between the years 1831 and 1837; and few places were entirely exempted from it, excepting those which were placed under strict quarantine. It still prevails (1845) in several parts of the East Indies.—*Copland's Dictionary of Practical Medicine.*

SURGERY.

CASE OF FRACTURE OF THE CERVIX FEMORIS INTERNAL TO THE ATTACHMENT OF THE LIGAMENT; PERMANENT EXTENSION BY MEANS OF A BANDAGE IN A STRAIGHT POSITION, WITHOUT A MACHINE. BY DR. HANMANN, OF ROSTOCK.

A DEAF and dumb woman, of 60, and meagre habit, fell upon entering her room. She was found lying upon the floor, and was carried, in consequence of being unable to stand, to bed.

The left foot as well as the left knee inclined outwards. This limb was about one inch shorter than the other; the great trochanter was nearer than normally to the spine of the ischium, but without any remarkable projection. By means of slight extension the natural length of the limb was easily produced, but the foot again fell, as soon as left to itself, outwards; the patient was not in a condition to raise herself; crepitation was wanting.

With the assistance of Mr. Behrens, of Rostock, the apposition, the bandaging, and the position, were accomplished. The patient was placed upon her usual bedstead, in the centre of the room, on a mattress, which was covered with a sheet; this was also firmly fastened to the edges of the mattress. After extension and counter-extension, both extremities were stretched close to one another; the foot of the sound extremity was supported upon a cubical block, covered with linen at the foot of the bedstead; the foot of the injured extremity lay in a stirrup-like sling made of linen, fastened to the footboard of the bedstead, and thus was extension maintained upon the injured extremity. Afterwards, between the knee and the calf, hemp having been arranged, both extremities were bound together by three ligatures, about three fingers' breadth, as firmly as possible, one of them above the knees, another below, and the third above the malleoli; they were united together by means of a needle and thread. The sound extremity served as a splint to the one injured. The patient lay horizontally, the head only being raised by a pillow placed under it; she remained in this position ten weeks (70 days). For a year the patient went upon crutches. The cure of the fracture is unattended with any lameness, and there is no shortening of the extremity.—*Journ. für Chir. u. Augenheilkunde Walther u. Ammon, Bd. V. s.* 89.

⁂ There is scarcely sufficient evidence of the existence of fracture in this case, and

conclusion as to the perfect
e bones, if fractured, can be
such premises. A post-mortem
reveal the nature of the injury,
ee of reparation. Is it not re-
at the recumbent position so
ned did not induce sloughing of
?—TRANS.

A BIFIDA.—OPERATION; CURE.

DR. TIMECOUR was called in,
to an infant aged two months,
nted a tumor seated in the
, and which, from the size of an
birth, had gradually acquired
of a fœtal head. Moreover, the
paralysed, and there existed on
le a club-foot—varus equinus.
the tumor was compressed
rods of wood directed in the
vertebral column, and at first
simple apposition. It was then
means of a trocar, and while the
owing, the pieces of wood were
e, and more together, in such a
to bring the two serous mem-
ntact.

r shrivelled, and soon became
without any serious con-
and, upon the fifth day the
portions were removed upon a
he rods of wood. Cicatrization
ted by a kind of fistulous open-
llowed the flow of the rachidian
oreover, a sort of hernia of the
alis, which it was necessary to
ods were removed on the tenth
the fifteenth the second ligature
own accord. Dating from this
re proceeded rapidly, and seven
r the operation the infant had
proper development. The
l cicatrix was scarcely apparent;
to repose upon a cartilaginous
h might perhaps be the com-
of vertebral ossification.—*Gaz.*
No. 1, 1846, p. 6; and *Gazette*

ATION IN THE PRAIRIES.

ng case is quoted, in the New
al of Medicine, from Gregg's
of the Prairies.

days before the caravan had
lout Creek, a Mr. Broadus, in
o draw his rifle from a waggon,
most, discharged its contents
n. The bone being dreadfully
e, unfortunate man was advised
an amputation at once; other-
g, in the month of August, and
arm, mortification would soon
t Broadus obstinately refused
this couse, till death began to
the face. By this time, however, the whole arm had become gangrened, some spots having already appeared above the place where the operation should have been performed. The invalid's case was therefore considered perfectly hopeless, and he was given up by all his comrades, who thought of little else than to consign him to the grave. But being unwilling to resign himself to the fate which appeared frowning over him, without a last effort, he obtained the consent of two or three of the party, who undertook to amputate his arm, merely to gratify the wishes of the dying man; for in such light hey viewed him. The only case of instruments consisted of a handsaw, a butcher's knife, and a large iron bolt. The teeth of the saw being considered too coarse, they went to work and soon had a set of fine teeth filed on the back. The knife having been whetted keen, and the bolt laid upon the fire, they commenced the operation; and, in less time than it takes to tell it, the arm was opened round to the bone, which was almost in an instant sawed off, and with the whizzing hot iron the whole stump was so effectually seared as to close the arteries completely. Bandages were now applied, and the company now proceeded on their journey as though nothing had occurred. The arm commenced healing rapidly, and in a few weeks the patient was sound and well.

CASE OF NECROSIS AND EXPULSION OF THE OS HYOIDES.

BY M. BOZAT, OF BORDEAUX.

(*Bulletin de l'Academie Royale de Médecine*, 1st Oct. 1844.)

MISS B., 41 years of age, deformed from rickets, was subjected to medical treatment for a swelling on the upper part of the neck, below the jaw. She was not much benefitted, and the tumor remained for a period of about five years. At length she began to be troubled with cough, and expectorated much tough frothy mucus, which was often streaked with blood. After a while portions of false membrane were also ejected; she lost her voice, and the respiration became difficult; she suffered from hectic fever, &c. One day, in a fit of coughing, she felt a hard body in the throat, which excited vomiting also, when a bone was expelled; after which her cough and difficulty of breathing abated, her voice returned in a few days, and she every day regained health and strength. On examination, the bone was found to be the hyoid bone, quite carious on its internal surface, but smooth on its external surface. The anterior and upper part of the neck, instead of projecting as usual, appears unnaturally flat and broad, but she has completely recovered the power of swallowing, which was difficult for a considerable time before the expulsion of the os hyoides.—*Ed. Med. and Surg. Journal.*

Correspondence.

DIAGNOSIS OF CARDIAC DISEASES.

Sir,—Kindly permit me again to trouble you. Now that I have returned from the far East, I think it but right to reclaim any little I can for myself, and the medical service in India. With reference to some remarks on a case of cardiac disease by Dr. Golding, in your No. of the 12th of June, allow me to quote the following from the Transactions of the Bombay Medical and Physical Society, Vol. i. p. 247. "Dr. Hope says, the morbid murmur of mitral disease is loudest about the fourth cartilage near the sternum (altered in later years), but we may be allowed to remark, that in the only two cases we have met with (cases published in the India Journal of Medical Science, 1835 and 1836), the morbid murmur was confined to about the *costal junctions* of the fifth and sixth." * * * "That betwixt the third and fourth cartilages we have generally found a murmur audible over all the sternum, and to a greater or lesser distance on either side of it. It is a *prolonged* sawing or rasping, and has *in every instance* been associated with the aortic valvular disease." Again, page 248. "To recapitulate, then, we would say, a loud or forcible permanent sawing murmur, supplanting the natural systolic sound, is indicative of aortic disease; and of valvular, if supplanting the diastolic. That in the latter it depends upon the aortic valves, if it is prolonged, superficial, and sawing or rasping; loudest under the middle of the sternum, and third and fourth left cartilages; and upon the mitral, if deep, hoarse, and abrupt under the costal extremities of the fifth and sixth."

Trusting you will excuse this, believe me,
Very truly yours,
R. H. A. Hunter,
Surgeon 57th Reg.
Chatham, Aug. 7th, 1846.

A CASE OF PLACENTA PRÆVIA.

Sir,—On the 23d of July I was called to Mrs. R——, of Ilford, a woman of large and muscular frame, about 30 years of age, and the mother of five children. She stated herself to be eight months advanced in pregnancy, and that during the day she had had some quantity of sanguineous discharge, unattended with pain. On examining her, I found the os uteri relaxed, and coagula in the vagina: gave her a dose of secale, and applied a plug of sponge covered with linen so formed that the ends of the linen were external to the vagina. She had subsequently Inf. Ros. Co. ℥iss. with xx. minims of Tr. Opii every six hours. On the 24th, she was better; had seen no further discharge, and withdrawn the sponge in the night. The 25th, in spite of remonstrance, she was sitting up. During the two following days, however, she had some return of hæmorrhage, and again kept her bed, applying herself the sponge; not more than three small coagula had passed, and she once more persisted in sitting up. On the 1st of August she was seized with profuse flooding, and an examination showed that the os uteri was dilated, and the placenta partly in the vagina, and partly attached to the left side of the os uteri. The umbilical cord and one arm were also presenting; there was a total absence of pain, yet the uterus had so contracted that, with the awkwardness of the presentation, it rendered my attempts to extract the child abortive. As flooding continued, I did not hesitate to detach and remove the placenta; the hæmorrhage then ceased, and I endeavoured to effect delivery until my hand was cramped; I could not secure either of the feet, and in attempting to bring the head into a position, brought away an arm. Wishing for further assistance, I sent for Mr. Allison, of Ilford, who finally succeeded in reaching the feet, and extracting the child. No hæmorrhage followed, and the patient is rapidly recovering without any untoward symptom.

In this case I would humbly submit my opinion, that had time been lost in attempting to overcome the difficulties of the position, and the impacted state of the fœtus, the hæmorrhage would, in all probability, have destroyed the mother, leaving but small chance of safety to the child.

R. G. Jay.
Barking, Essex, Aug. 5, 1846.

HOUNSLOW INQUEST.

Sir,—I am sure your numerous readers are indebted to you for laying before them last week the very succinct yet complete report of the medical and other material evidence that was brought forward at the inquest on the unfortunate case of private White, of the 7th Hussars. No case of punishment in the army has excited, both in public and private, so much of interest, odium, and animadversion, as this recent affair at Hounslow, while horror at the proceedings has been almost the universal expression of our journals on the occasion.

This has been entirely owing to the unexpected death of the culprit, at a period of twenty-six days after he was punished, and seven days after "his back was quite well,

leclared fit for duty." On the fifth
fore his death, he made the first
nt of pains about the heart, which,
tanding every care bestowed by the
of the regiment, ended in death.
rdict of the jury was, that White
rom the mortal effects of the severe
el flogging which he had received on
of June."

not becoming to impugn the verdict
ve men who are upon their oaths to
honest and just deliverance on such
but it is now permissible for any
to examine and weigh the evidence
as been brought before the public in
to-judicial process of the inquest.

gh your remarks of last week, at the
ion of the case, are full of wise
and instructive import, I will, with
rmission, take further notice of some
of the medical evidence that seems
uire more professional examination
s yet been publicly paid to it, from
military or private practitioners; so
important point in pathology or
le change may be verified, and if
set at rest.

e first place it may be remarked,
evidence tendered by the military
officers seems to have been correct,
forward, and scientific — such as
their education, experience, and
igh responsibilities to the heads of
epartment—not to insist upon the
pportunity after death which they had,
advantage, of examining the body.

uch may be said of the evidence of
ay, which, in all material points,
with that of the military surgeons;
en his report of the autopsic appear-
liffered from theirs, it is easily to be
ted for by the progressive decompo-
or five days after death, in very hot
, and three days after the body had
reviously inspected and the viscera
ed. Indeed, Mr. Day says, "the
as in a very decomposed state, and
difficult to make observations."
this witness was nearly entrapped
it that the muscular disorganization,
noticed hereafter, was the cause of
yet he "only agreed with Mr.
as to its appearance, but he did not
far as to say that it accounts for

now come to the important evidence
Wilson—important, only as it deter-
the jury to give their verdict in pre-
to the evidence of four highly re-
le and experienced members of the
ion, one of whom was delegated
y by the jury to make the inspection.
idence of Mr. Wilson was derived
inspection of the body eleven days
ath, and six days after Mr. Day had

found it in "a very decomposed state," while the atmospheric temperature continued high, and more favourable to decomposition, from its electric and hygrometric condition. The principal feature of Mr. Wilson's evidence was his finding a part of the multifidi spinæ muscles converted into a "soft pulp," which he called a "pulpy softening of the muscles"—leading to the direct inference that this change was a pathological one, that had taken place during life, or very soon after death. In addition, the muscular part affected was found by him surrounded by ecchymosis, also held by anatomists to be a process that only obtains during life, from fluid and living blood. Mr. Wilson, moreover, attributed the pulpy softening to have been caused by excessive contractions of the deep seated muscles, during the agony of punishment, and also that the presence of "such a disorganized and inflamed muscle, in close contact with the lining membrane of the chest, might have produced fatal effects upon the heart.

These are the chief points of this singular evidence, and they ought to meet with a rigid examination, because they involve two important questions; first, whether it is physiologically possible for very short and deep-seated muscular fibres, as those of the *multifidi*, to rupture themselves by automatic contraction, while others having a vastly greater length, and void of lateral support, and more exposed to action from irritation and pain, were not in the least similarly affected: and secondly, whether it is possible at the end of eleven days after death, and under the conditions to which White was exposed, to diagnose cadaveric decomposition in a muscle from rupture of fibres and inflammation during life.

Such spontaneous injury, resulting from flogging in the army or navy, has never, it is confidently presumed, been previously even suspected. The author of this communication has officially witnessed many instances of such punishment, but such a result never arrested his suspicion, as not the least indication of such a lesion ever presented itself. At any rate, if such a lesion from agony should ever take place, it would with much more likelihood fall upon the pectoral lætissimi dorsi, or other external muscles, as Dr. Hall, at the inquest, very reasonably remarked. These long and unsupported muscles are, on some occasions, seen spasmodically to contract; and if such an accident as spontaneous rupture should possibly occur, it would much more readily fall upon them than upon the multifidi, so deeply imbedded, and whose separate muscles only extend from one vertebra to the next adjoining. Well might Mr. Wilson say, it was an observation "which was never made before," and it may justly be averred, that it will never be observed again.

It, moreover, appears unaccountable that Mr. W. should find the "interior of the spine in a state of extreme decomposition, perfectly devoid of nervous substance, which had been converted into fluid, and flowed away by decomposition," with no indication of disease; and yet he attributed the softened muscle, lying on the exterior, and exposed to cadaveric solution for eleven days in hot weather, and that in the most gravitating part of the body, to a pathological change, and not to a contemporaneous decomposition. This is certainly giving a degree of independent persistence to such pathological conditions that must be held to be quite new, and not only new, but altogether paradoxical to science as it exists.

The same may be alleged of the state said to be found *ecchymosed* by Mr. W. This being a condition of parts only obtaining in the living body, and very soon yielding after death to decomposition, it is beyond all conception how the inspector was able to discriminate this alleged condition from the sugillations and chemical diffluence that must have existed in these parts so long after death; and this at the time when the spinal marrow was melted away out of the vertebral column from decomposition.

These are grave questions: they have served, with a coroner and jury, for the decision of a most important and serious point of a public investigation, which might have implicated the liberty and character of public men. They ought, therefore, to be examined by, and have the decision of, the higher courts of medical science, to see "whether these things be so."

The exclusion of the military surgeons from being present at the inspection of the body by Mr. Wilson was more than uncourteous; it was, as far as the law allows, unfair, as it might be said that, at the time, these gentlemen were in a position of being possibly criminated; and therefore they were entitled to be present, either of themselves or by their representative, though not permitted to meddle with the inspection. If a verdict, therefore, had been delivered implicating any of their characters for honesty, care, or talent, it would, under the exclusion, have been manifestly unjust.

I had intended to have made some correlative remarks on the serious cautions to the medical officers of both services, with which you conclude your excellent commentary on the whole case, but I will only take the liberty of shortly saying that it may well be supposed that individuals found to be affected as you point out are not only unfit to be flogged, but are unfit for the services, and at least would not be kept at duty. In declared or detected disease there can be no hesitation in pronouncing a man fit or unfit for flogging, or to be in the service, but the delicate question may often arise, how far the faint and equivocal indications of minor derangements revealed by the stethoscope, and other modes of examination, ought to free a culprit from flogging, when there would be rational fear that imprisonment would very likely tend to develope these mere indices of disorder into positive disease.—I am, sir,

Yours very respectfully,
J. Black, M.D.

Manchester, Aug. 17, 1846.

THE CASE OF DEATH FROM MILITARY FLOGGING.

As the report of Mr. Day's evidence published in our last number was taken from the Times newspaper, we think it only an act of justice to that gentleman to give insertion to the following letter which he has since addressed to the editor of that journal.

Sir,—Having been subjected to a great number of most illiberal remarks relative to my conduct at the late inquest at Hounslow, I most respectfully solicit permission to make a statement in reply.

In the first place, I must observe that I had heard nothing of the affair (with the exception of some vague reports which had been circulated during the day) until the inspector of police called on me with the coroner's warrant to examine the body of a soldier at Hounslow barracks, who was supposed to have died from the effects of flogging. He gave me a verbal message from the coroner, that I was to pay particular attention to the skin of the back, as a portion of it was missing. On my arrival at the barracks, accompanied by Dr. Macinlay, one of my partners, I found that upwards of three weeks had elapsed between the punishment and the death, that the body had been already examined by two military surgeons, and that they had forwarded their report to the Horse Guards. I concluded from this, that the reason of my being desired to inspect the deceased was that the jury might be disposed to place more confidence in the report of a medical man unconnected with the army, and who was personally known to most of them. The body was in a state of extreme decomposition, and the difficulty of making a second *post-mortem* examination will be attested by every surgeon; nevertheless I saw quite sufficient to enable me to state the cause of death. Having also duly examined the back, compared the detached portion of skin, and ascertained that the exposed muscles were perfectly sound, I considered that I had done all that was requisite. I made some memoranda of

bserved, and when I was made
ith the report which had been
Dr. Hall and Dr. Reid, found
quite in accordance, although
s were necessarily far more
regretted that Mr. Wakely
er to exclude the other medical
the first adjourned inquest, as
o me that their evidence might
On Mr. Wakley asking me the
spinal canal, I told him I had
d it, and gave as my reason
atisfied myself with respect to
death, and that the body was
composed to render it possible
ny disease there, supposing any
ted. The coroner, however,
ifferent opinion, and the jury
th him in the necessity for ex-
body, in order to examine the
Wakley is reported in *The*
turday last to have said in the
mmons, that "the jury were,
ause or other, dissatisfied with
man they had selected." I
that the jury expressed nothing
to me, and if they were so, it
what was said to them when
s cleared of strangers.

ey also says I was not excluded
ection at the exhumation of the
rse I was not, as he gave me
inspect it, stating I should be
ome gentleman from town; and
he deputy-coroner, wrote to me
e time, and directing me to ex-
er medical gentlemen. Why
n was deemed requisite I am
but this I can say, that Mr.
red his regret that Drs. Hall
ho had been prevented entering
ard, were not present to see the
on discovered in the muscular
gives me pleasure to add my
mony to the well-known talent
Mr. Erasmus Wilson, but the
made to the coroner was simply
ving agreed upon a report, and
ed it, I thought it would have
r in Mr. Wilson to have com-
me in the interval the result of
sideration; and I added, that
help thinking he had drawn
rgely on his imagination. My
as, and is, that the cause of the
the muscle was purely con-
that it had no connexion what-
e internal disorder. Believing
opinion of Mr. Wilson, I was
eedingly surprised to hear his
fore the jury. I still maintain
ere no anatomical appearances
death could be traced to the
but that whether the mental
confinement to the hospital, might have rendered the deceased more liable to disease, or less able to bear it, is a question which no one can positively decide. I have thus endeavoured to reply to one charge, viz., neglect of my duty by not examining the spine on the first occasion, and must beg to add that it is a portion of the body not usually inspected, but that I should have done so had Mr. Wakley given given me the least intimation that he wished it. I ventured to suggest to Mr. Wakley that the jury would probably not require the exhumation of the body if he would hear the medical evidence before they decided. I will not believe the jury did me the injustice to suppose I wished to conceal the real facts, or that they expected me to give evidence contrary to my conviction; but I can easily imagine they were somewhat disappointed to find what they "conjectured" to be my opinion (for that I gave an opinion at the first adjourned inquest is untrue; indeed, I had no opportunity afforded me), was in a great measure at variance with their preconceived notions. I pass over the absurd charges which have been made against me, not only in conversation, but in the public prints, of being biassed by local interests, merely remarking that if I had been desirous of courting popular favour, I should have endeavoured to coincide with the supposition that flogging was the immediate cause of White's death; but it was my imperative duty to adhere strictly to the real facts which were brought before me, regardless of who they pleased or displeased. One paper states that the jury made an improper selection by fixing on "a mere country practitioner" (forgetting that "mere country practitioners" are compelled to combine the duties of physicians, surgeons, and apothecaries in their own persons), and they should have selected some one who had "a character to lose." I make no claim to personal reputation; but as the son of a gentleman who has practised in this place upwards of forty years, and who, I will venture to say, enjoys the confidence and esteem of all who know him, I may boast of having some character to maintain. I must now offer every apology for this long intrusion, and, in taking leave of the subject, beg to express my sense of the extremely courteous conduct I experienced from all parties concerned in the lengthened inquiry, although I had the misfortune to differ from the views of some. That the effect of the inquest will be exceedingly beneficial to the army, appears certain, and that was doubtless the cause of the extreme minuteness deemed necessary at the investigation.—I have the honour to be, sir,

Your most obedient servant,

HORATIO G. DAY, Surgeon.

Isleworth, August 10, 1846.

Medical Intelligence.

UNIVERSITY OF LONDON.

M.B.—FIRST EXAMINATION. — EXAMINATION FOR HONOURS.—1846.

Thursday, Aug. 13.—Morning, 10 to 1.

Anatomy and Physiology.

Examiners, Mr. KIERNAN and Professor SHARPEY.

1. The head being divided by a vertical section in the median plane, and the dissection being commenced from the inside of the pharynx and fauces, and carried outwards to the integuments, you are required to describe in their order the parts that would be successively met with in so dissecting a space marked out as follows:—above, by the zygoma, the body of the sphenoid and basilar process of the occipital bone—below, by the base of the inferior maxilla and the great cornu of the os hyoides—behind, by the meatus auditorius, the mastoid process, and the upper part of the sterno-mastoid and anterior vertebral muscles; and before, by the anterior border of the masseter and the tuberosity of the superior maxillary bone, so as to include the pterygo-maxillary fissure and posterior palatine canal.

Afternoon, 3 to 6.

1. Describe the parts situated in the plantar region of the foot (except the bones) in the order in which they present themselves on dissection.

2. Give an account of the several structures which enter into the formation of the skin, including a description of the glands, hairs, and nails.

M.B.—EXAMINATION FOR HONOURS, 1846.

Friday, August 14.—Morning, 10 to 1.

Chemistry.

Examiner, Professor BRANDE.

1. Explain and illustrate the methods of determining the specific gravities of solids, liquids, gases, and vapours.

2. Explain the construction and action of the common voltaic battery; the respective influence of the size and number of the plates; the circumstances which render its action inconstant, and the arrangements by which this inconstancy is prevented: state the causes which influence the direction of the electric current, and the changes which the different electrolytes suffer when the circuit is closed. Describe the theories of the electrolytic decomposition of aqueous solutions of sulphate of copper, and of nitrate of potassa.

3. Describe the external and the chemical characters of the varieties of urinary calculi; the composition and properties of their proximate components; and explain the chemical principles upon which the medical treatment of calculous disorders is founded.

4. What are the principal metallic substances constituting the granular ore of platinum? How are they respectively separated, and what are their characteristic properties?

Afternoon, 3 to 6.

Materia Medica and Pharmaceutical Chemistry.

Examiner, Dr. PEREIRA.

1. How would you proceed to determine the purity of nitrate of silver, with especial reference to the suspected presence of the nitrates of potash, soda, lead, and copper?

2. Describe the different methods employed in commerce for making sal-ammoniac, and the mode of preparing *Hydrargyri Ammonio-chloridum*, Ph. Lond.; and explain the changes which occur during these processes, according to both the ammonium and amidogen hypotheses.

3. Give a botanical description of the fruits of *Alpinia Cardamomum*, *Momordica Elaterium*, and *Daucus Carota*.

4. Describe the musk-bag; stating its situation in the musk animal, its structure, and the supposed uses of its contents. State the class and order of the musk animal. Point out the characters by which genuine musk-pods are distinguished from spurious ones. Describe the chemical characters of pure grain musk, and the conclusions which have been drawn with respect to the nature of its odorous principle.

5. Describe the medicinal properties, uses, and doses of Assafœtida, Chloride of Barium, Colchicum, and Uva Ursi.

6. You are required to name—

α. The barks respectively labelled A, B, C, D, and E.

β. The leaves and fruits marked F.

γ. The fæcula labelled G.

[The use of a microscope will be supplied to those candidates who desire to avail themselves of its aid in answering this question].

Thirty candidates presented themselves at this examination; of whom three withdrew before the examination was concluded, and the following passed:—

First Division.

Bholanoth Bose, Medical Coll. of Calcutta, and University Coll.
Burgon, Joseph, University Coll.
Cammack, T. Armstrong, University Coll.
Cooke, Robert Thomas, King's Coll.
Eade, Peter, King's Coll.
Filliter, William, University Coll.

r Seal, Medical Coll. of Cal-
niversity Coll.
nuel Osborne, Guy's Hospital.
Sayer, University Coll.
nas, University Coll.
ph Farmer, University Coll.
William, King's Coll.
d, University Coll.
owell, St. Bartholomew's Hos.
, Guy's Hospital.

econd Division.

mas Rhodes, King's Coll.
ad, University Coll.
King's Coll.
Wm. St. George's Hospital.
wen, University Coll.
Thomas, University Coll.
attershell, King's Coll.
k Foreman, University Coll.
nes, St. Thomas's Hospital.
nphry, University Coll.
ard Freeman, University Coll.

MEDICAL AND SURGICAL ASSOCIATION.

ry meeting of this association
to take place in Norwich on
20th instant. Many of our
robably availed themselves of
y which, according to a cir-
, was given to them of visit-
cting the various institutions
interest in science and art in
and its environs abound.
ave made special reference to
n our last number, had the
d us earlier.

L INSTITUTE OF PRACTI- MEDICINE, SURGERY, AND

general practitioners was held
r Square Rooms, on the 12th
ceive a report from the Com-
National Association, on the
rming a National Institute on
already announced in this and
Schedules containing cer-
ns, in the shape of queries,
ery member of the Associa-
every professional man who
m. It appears that out of
to the Committee, 1288 con-
s favourable to the formation
ent institute, on the plan pro-
Pennington presided at the
ious resolutions were proposed
among others one to the effect,
titute consist of those gentle-
already signified their inten-
rate in the formation of the
h other qualified practitioners
thin a specified time, or who
members in accordance with
the future arrangements of a regularly constituted council."

REPORT OF THE COMMITTEE OF THE LEITH CHAMBER OF COMMERCE ON QUARANTINE REGULATIONS.

1. In the opinion of your committee, the Quarantine Laws are, as regards Britain, altogether unnecessary: all diseases, against the introduction of which they have been established, arise, according to the best medical evidence, from climate and local circumstances, are only propagated by epidemic influence, and have never been proved to have been transmitted from one locality to another, unless similar causes and influences were existing;—besides, owing to the distance of Britain from countries where such epidemics prevail, and especially as regards the Mediterranean, assuming the average passage at 40 days, any latent disease, even supposed contagious, would have ample time to develope itself*; and further, no instance can be shewn of the importation of any infectious disease by means of shipping. In the recent lamentable case of the *Eclair*, from the coast of Africa, it has been proved, that what might have been yellow fever there, had become, at Portsmouth, the common typhus of this country. As to the intermediate ports in the Mediterranean, where similar climate and similar epidemic causes may be supposed to exist, a difference of opinion may prevail with respect to the transmission of contagious disease, but the system of quarantine established there, and the completeness of the Lazarettos, affording every facility to vessels to discharge and re-load, the regulations in force there can scarcely be called oppressive. Yet even in these ports, the testimony of Mr. Turnbull, Consul at Marseilles, proves them to be of little avail. Mr. Turnbull states, that though the coast of France, in his neighbourhood, was peculiarly liable to contagion, supposing contagion to exist, and though vessels were almost daily arriving from plague countries, there was no instance of any expurgator having taken the plague since 1729; one person in that year, when opening a bale, dropped down dead. This of course could not arise from plague, as it does not prove fatal in this way.—Again, in the evidence before the House of Commons in 1825, it was proved that although the intercourse between Turkey, Egypt, and Persia, was great and unrestricted, yet plague was entirely unknown in the last country.

II. But assuming contagious diseases to be carried by shipping, and these laws necessary, the term of quarantine ought to be proportioned to the length of the voyage. It appears absurd that a vessel which has made the passage, say from Alexandria to Britain, in 40 days, and another which has taken 60, should be detained an equal time by quarantine restrictions.

---

* Quarantine, it may be noticed, is taken from 40—this being the period stated by the original framers, within which the disease would be developed.

III. Still, assuming such laws to be necessary, proper facilities ought to be afforded to shipping for discharging and reloading, by means of Lazarettos, as at Malta, Leghorn, and Marseilles. In England, not even at Milford Haven, or the Thames, is there, in the words of M'Culloch, "a Lazaretto where a ship from a suspected place may discharge her cargo and refit,—she is detained frequently at an enormous expense during the whole period of the quarantine, and perishable goods are materially injured." In Scotland also, there is not now even a place where vessels, which do not require to discharge and air their cargoes, can even be allowed to lie quarantine. In a recent instance at Liverpool, a vessel (belonging to this port) arriving from Alexandria, was detained seven weeks waiting for her turn at the Lazaretto, while another, which had sailed from the same port subsequent to her, discharged in twenty-one days, having come in before numerous arrivals, while both were subjected to an exorbitant charge for landing the goods from the Lazaretto. Were the Government even to establish proper depots in England, say at Milford Haven and Liverpool for the West, and Stangate Creek and Hull or Grimsby for the east coast, (denying still however the necessity of this) where vessels could discharge and load an outward cargo of other goods, the homeward cargo might be sent coastwise at a much less expense than that incurred by the detention of a vessel and crew for six weeks; and it would be conferring a boon on the shipping interest, by removing a restriction on commerce which, with reference to Egypt alone, from the present aspect of affairs, may be expected greatly to increase.

IV. If the quarantine laws are permitted to exist, proper instructions should be given to consuls at the different suspected ports, that they might be able to inform masters of vessels whether they are to proceed to Stangate Creek or to the port of their final destination. On one occasion, a vessel arrived at this port from Smyrna, and was ordered back to Stangate Creek, though directed by the consul to proceed to the port of discharge. Another at Alexandria could obtain no information from the consul, and is even now compelled to call at Cork or Falmouth, after the result is ascertained here.

PILLANS SCARTH, Secretary.

EPIDEMIC IN FRANCE.

A SINGULAR epidemic disease has lat
shewn itself in the valley of the Isére, fro
Dauphiny to the Tarentaise. It is of a f
brile character; its attacks are very sudd
and are indicated by pain in the region
the kidneys, headache, nausea, and vomiti
Although its course is mild, and there is
instance as yet of its having proved fat
yet the consequences have been serious, i
asmuch as it has attacked large numbers
the labouring population at a time wh
their services were urgently required for t
harvest. At a village in the district of M
lettes this fever has attacked 160 out of 40
inhabitants.

QUACK AURISTS.

A Dr. Mène, who had acquired a great r
putation in the treatment of diseases of t
ear, has just been condemned by the Corr
tional Tribunal of Charleroy to a fine
300 francs, for selling an acoustic oil whi
was proved to be nothing more than c
loured *oil of olives!* It is to be regrett
that there is not a summary power of de
ing with cases of this description vested
the magistrates of our police courts.

MISTAKEN IDENTITY.

A CASE has recently occurred, which sh
what caution ought to be exercised by w
nesses before they undertake to swear to t
identity of others from their features.
charge was lately brought by a wom
against an officer in the army, at Bright
that he had been married to her in Lond
under another name, but a few months b
fore, and had afterwards deserted her. S
swore positively to his person; and the cl
gyman who performed the ceremony w
present, and ready, as he declared, to ma
oath that the officer was the identical indi
dual whom he married to the woman. Fo
tunately for the accused, he was able t
prove, by the most conclusive evidence, th
he was in Brighton, and not in Lond
as the clergyman alleged, at the ve
time the ceremony was being perform
The magistrates dismissed the case; th
could do no otherwise, as it was clear th
was a mistake. The clergyman, not satisf
with this mode of disposing of the ca
wrote to a public journal to complain of h
evidence not having been called for; a
reiterating his statement that he was qu
positive of the identity of the officer w
the person married to the woman. It
creditable to the candour of this gentlem
that he has very recently, by a letter pu
lished in the same journal, acknowledged h
mistake. He has since been shewn a D
guerreotype likeness of a man who desert
his wife and family, and came to town at t

ne corresponding to the period of the urriage; and this has satisfied him that he us in error respecting the identity of the ficer. Persons have been on several occa- ons wrongly convicted and punished upon istaken evidence of this kind. We may be ten able to swear from a casual view, that e party charged *resembles* the individual hom we have seen, when we are not justi- ed in swearing positively that he is the dividual.

MEDICAL POLICE.

wo important Bills in relation to medical olice have been postponed until the next ssion of Parliament. These are, the Bills r the abolition of interment in towns, nd for the prevention of the nuisance of noke from furnaces or manufactories. The overnment has promised to take these sub- ets into consideration next session, and to ake them parts of one great sanitary easure.

REMARKABLE CHEMICAL DISCOVERY.

HE *Athenæum* reports a remarkable disco- ery lately made by Professor Schönbein. otton is so prepared, probably with a lminating compound of nitrogen, as to be ddenly converted by a spark to the gaseous ate, without evolving smoke, leaving, as a sidue, only a small quantity of carbonaceous atter. Balls and shells are stated to have en projected by this prepared cotton, the ojectile force of which is twice as great as at of gunpowder. Four ounces blew to eces a thick wall; and it was calculated at it would have required as many pounds gunpowder to produce an equal effect. wetted, the cotton reacquires its proper- s on drying. It is stated that the Pro- ssor will give a full account of this re- arkable substance at the meeting of the itish Association, which will take place, at uthampton, on Thursday, the 10th of ptember.

SPORADIC CHOLERA IN PARIS.

om the last number of the *Gazette Médi- le* (15 Aout), we learn that there are two rms of cholera now prevalent in Paris, one aracterised by great mildness, and the her by great severity in the symptoms. om the report, it would appear that the ses are precisely similar to those which ve occurred recently in this metropolis. all instances diarrhœa has for several days eceded the attack. The treatment which s been found most successful, consisted in r diet, the use of broth, and Seidlitz ater. According to the account before us, case has proved fatal. There can be no ubt that the disease has arisen from the me cause in Paris as in London, namely, e long-continued tropical heat of the pre- nt summer. This alone, without reference to the improper use of fruit, which it may be remarked has been unusually scarce, is sufficient to account for the prevalence of the disease. Our contemporary, trusting to the reports in the public journals, represents cholera to be the great cause of the increased mortality in London—a statement which is disproved by reference to the official tables.

DEATH FROM LIGHTNING.

DURING a storm which occurred on the 5th of August in the Canton of Levroux, a group of labourers was struck by the electric fluid. Four were killed on the spot, and five or six severely wounded. It was remarked that the individual whose body bore the most extensive marks of injury had worn a goatskin. There were the most severe lacerations about it; and, in three hours after death, it became as rigid as a bar of iron. In most of those who were struck, the skin was reddened; but the clothes bore no marks of burning. This fact shows that the opinion that the bodies of persons who have been killed by lightning do not become rigid after death, is incorrect.—*Gaz Méd.*

RESULTS OF THE CÆSAREAN OPERATION.

DOCTOR KUNSEMULLER performed this operation on three females. Case 1 was that of a woman, aged 41, who had borne six children easily. The operation was performed at the end of the seventh pregnancy: the infant was taken out dead, and the woman died the day following. Case 2. A woman, aged 43, had had ten easy labours. Her pelvis deformed by osteomalacia, rendered the operation necessary in the eleventh pregnancy. The child was dead, and the woman died on the sixth day. Case 3. A woman, aged 38, had had five easy labours. She suffered much from want and disease, and her pelvis became deformed. On the sixth pregnancy, the antero-posterior diameter of the pelvis was found to have become smaller; but the child was extracted by the forceps. At the end of the seventh pregnancy, osteomalacia had advanced to a considerable extent. The Cæsarean operation was resorted to, and both mother and child were saved.—*Gaz. Méd.*

ON THE COMPOSITION OF AIR AT DIFFERENT HEIGHTS IN CLOSE APARTMENTS.

M. LASSAIGNE has drawn the following conclusions from a series of experiments on this subject:—

1. In rooms where the air is confined, and has been respired for some time without renewal, the carbonic acid expired is not found exclusively, as some have asserted, in the lower strata.

2. In accordance with the laws of physics, confirmed by experiment, the carbonic acid is nearly equally diffused throughout the whole

volume of confined air which has been respired by a certain number of persons.

3. The slight differences observed would lead to the inference, that the proportion of carbonic acid was, under these circumstances, greater in the upper strata, were it not that the differences may depend upon errors in the quantitative estimation of the gaseous components of the air.

4. These facts show the erroneous principles upon which some modern theories of ventilation are based: for it is clear that the *whole* mass of air which has been respired by many persons requires renewal, so that the vitiated air may be entirely expelled.

5. The uneasiness experienced from respiring the heated air in the upper part of crowded and badly ventilated theatres, is due rather to its rarefaction than to its chemical composition; for the latter is almost identical in the upper and lower strata. The acts of respiration are more (?) full and frequent when rarefied air is breathed; hence certain physiological effects are induced which are not observed in the respiration of air at the common temperature.—*Comptes Rendus.*

OBITUARY.

MEMOIR OF THE LATE DR. JOHN BOSTOCK, M.D. F.R.S. &c. &c.

AMONG the deaths recorded in the obituary of our last number, was that of Dr. John Bostock, whose name has been long and prominently associated with the progress of medical and general science.

He was a native of Liverpool, and the only child of the late Dr. John Bostock, who after a bright but very brief career of practice in that town, was cut off at an early age in the year 1774. The subject of the present memoir was born in June, 1773.

Under the immediate tuition of Dr. Priestley, Dr. Black, Dr. Monro, and Dr. Hope, he speedily acquired an enthusiastic love of science, more especially as connected with physiology and the practice of medicine. Having graduated at Edinburgh in 1794, he settled in his native town, where he distinguished himself not only by the ardent and successful exercise of the profession of his choice, but by the most active encouragement of the local charities and the literary institutions. He removed to London in 1817, when he finally renounced the practice of physic, influenced chiefly by the greater facilities afforded by the metropolis of prosecuting his favourite study, and of enjoying the society of his scientific friends. To those already mentioned he was now able to add the illustrious names of Davy, Wollaston, and Young.

Prior to this period he had contributed many important articles to Brewster's Encyclopædia, and to most of the leading literary and scientific journals. He now proceeded to publish his "System of Physiology,"—a work of the greatest interest and importance, and the first systematic and connected view of the science that had been put forward in this country. The third and last edition of this work was published in 1836.

He afterwards wrote a "History of Medicine," forming part of the introduction to the Cyclopædia of Practical Medicine. His other writings are numerous; but it is not possible in a brief memoir to enumerate even the titles of his separate publications, or of the papers contributed by him to the Cyclopædias and leading journals of London and Edinburgh. Since his residence in London he has been associated with most of the scientific Societies, and has taken an active part in the management of many of them. In 1826 he was President of the Geological Society; in 1832 was nominated Vice-President of the Royal Society, and has been on the Council of the Linnean, Zoological, Horticultural, and Medico-Chirurgical Societies, and the Royal Society of Literature. In a word, he may be said to have occupied a prominent position among those distinguished men who have in our day united their powerful and efficient energies in the advancement of medical and physical science. In private life no man was more respected or beloved; he was equally ready to impart the overflowing of his sensitive and affectionate heart, and the varied stores of knowledge with which his intelligent mind abounded.

He died of an attack of cholera at the age of 73.

DR. NEVINSON.

On the 12th instant, at his house in Montague Square, C. D. Nevinson, M.D., aged 72.

DR. GASTÉ.

Lately, Dr. Gasté, physician in chief to the French army in Africa.

M. RAMBAUD.

At Algiers, M. Rambaud, surgeon in chief to the Military Hospital of Bona.

MM. MARTIN, OF LYONS.

Two eminent surgeons, Martin l'aîné, and Martin le jeune, have just died at Lyons within a few days of each other. They were brothers, and for many years filled the posts of Chief Surgeons to the Hospital of La Charité in that city.

M. VITON.

The French papers record the death of M. Viton, who had been for a period of nine years Surgeon-major in the African Army.

Lectures.

A COURSE OF LECTURES ON ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

BY PROF. FARADAY, D.C.L., F.R.S., &c.

LECTURE VI.—May 30, 1846.

Electro-Magnetism. Reciprocal influence of electrical and magnetic forces,—production of one from the other,—iron magnetised by being placed at right angles to the course of the current,—effect of the helix in accumulating power,—reversal of the poles of magnets by the current,—different action of the current on soft iron and steel,—power retained by steel, lost by soft iron,—power of an electro-magnet,—no magnetism conveyed by the current to other metals,—rules for obtaining a maximum effect,—polarity of the arrangement,—the current apparently gives power but loses none,—its chemical force the same with or without the production of magnetic force, proved by the quantity of water decomposed being equal in the two cases,—the current a test of the purity of soft iron,—production of poles and their multiplication by fracture,—enormous masses of iron sustained by the electro-magnet,—increase of power in bringing the two poles together,—difference between horseshoe and bar magnets,—inductive power of the electro-magnet,—magnetic repulsion of similar poles,—magnets for Observatories made by the current,—demonstration of the curves of magnetic force,—explanation of the dip of the magnet,—indifference to other metals,—identity of electricity and magnetism,—power of the machine battery compared with that of the current.—enormous difference in the quantity of electricity in the two cases.

I THINK that the experiments of last week, by which you saw the influence exerted by the current in voltaic wire upon the magnet, will have prepared your minds for some magnetic properties of the current itself, which must be regarded as a magnet. Indeed, we can hardly expect in natural philosophy that agents or substances of any kind should exert a power in which they do not themselves take part. But still, at our last meeting, our attention was confined to the reciprocal influence which the electric current and magnetic force have on each other, and we did not go to a consideration of the means by which we might make one produce the other. We made one influence the other. To-day we come to a point of the same nature, but far higher in its character, viz., where one actually *produces* the other. Here being a wire which I can attach to the terminals of the battery that arise from the table, it is evident that when the wire is made to complete the circuit, the current will run through it. I do not want to-day to show you its influence over magnets, but merely the process of making them, or of evolving the power. When they are left in any steady condition then we can test such things as bars of steel or pieces of iron, and ascertain whether they are magnets or not. Take this steel and examine it carefully in the horizontal position, that is to say, perpendicular to the dip, and it ought to attract both ends of this needle; or both ends of a piece of wire ought to attract both ends of the needle: and this you observe is the case. I have the same attraction as I should also have here. They are approaching, showing you that this body has not as yet any magnetism, except such as this magnet indicates upon it by juxtaposition, according to the law I showed last week. As soon as I take this current I find this is a magnet by attracting bodies, and by making magnets. A few experiments will show this. Observe, the wire has no influence over the filings; it may lift them up a little, but it does not retain them. If contact be made you will find a strange difference; there is powerful attraction of the iron filings, but the moment contact is broken they fall off. We have here, then, produced temporary magnetic force by the current. In order to make this piece of steel a magnet by the power of the current it must be placed on one side of the wire, and across the wire—a curious condition; it must not go through the wire, or the wire through it: that is, it must not be parallel to it, it must be on one side and across the wire. If there were a hole in the bar, and the wire went through it transversely, it would give a certain amount of magnetism. Contact has been made and broken, and the current has run at right angles to the piece of steel, and we shall soon see whether it attracts: each end attracts pretty strongly, so that here we have little or no difference. If I take a needle—a smaller mass—I shall very likely get a better result than I had before;—there is attraction; and there, is slight repulsion. But do not regret the smallness of the force, for I have had recourse to it merely to show the first element of power. These are the elements of a power from which will arise conditions that are far higher in degree, so that in another form we should hardly recognise it as the same, unless we drew attention to it in its incipient stage. This piece of wire has now this force in all parts of it; but I have taken advantage only of one part. If I take this piece of copper wire, and turn it round so as to inclose the iron in a coil or circle of wire, I am making more of the current to act on the steel than before: contact has been again made and broken: and now let us examine it. Now I have got a magnet: this piece of steel, before scarcely affected, has now obtained an attractive and repulsive power. You observe how by the same force we have increased the effect, as there is attraction at this end, and repulsion at that end. Now this bar of steel is a strong magnet—it will take up the filings; so that we can take advantage of the power which has been thus imparted. We can, if we please, arrange this steel bar so as to make it a magnet of the strongest description. Here is a little arrangement to bring the wire round the steel. I will take this wire, and wind it round, making four or five coils. This experiment is the same as the other; I am still shewing the influence of a current of electricity. It is now gathered into a long piece instead of a short one, and with this we may produce attraction or repulsion in bars of steel at pleasure, and beyond this I may give permanent magnetic power. Here is another bar: this end attracts: we will see what the other will do. It also attracts: but I want to make it repel. It is now altered; what was a strong attractive pole to one end of the needle is now a repulsive pole, and *vice versâ:* observe what a bundle of filings it takes up. It is not a mere magnet, but I can make and unmake, and remake at pleasure, by the mode in which the bar is placed with respect to the current.

The next point I have to bring before you with regard to the power of making a magnet is the difference between *soft iron* and *steel*. Suppose I take these small nails, or these filings, to test the measure of the power which the current conveys to bars of steel and soft iron. We will treat the two bars alike; we put that in, it is a magnet; we put this in, it is the same; these are the two ends. Let us examine them by the nails and filings, and you see how much more the soft iron takes up than the steel while under the current. The steel bar, however, retains the power longer, while soft iron does not retain it. Here is the steel bar removed from the current; we will take these nails and there is the measure of the power of that bar. (Some were attracted.) I want a rough measure, but still one that will show you that it keeps a good deal of power. Here is the soft iron, which, while under the current, manifested greater power, but it now scarcely attracts. The steel has great power, but it cannot keep all the power it has, for it loses much when contact is broken, though it retains a good deal. The soft iron shows far more magnetic power when in the coil, but the moment the current is gone the power goes with it. There is no retention of magnetic force in the soft iron as compared with the retention of it by the steel. There is no induction in the steel to the extent of the induction which takes place with soft iron; under the current the iron is far more powerful when left to itself than the steel. This is very important to be considered as we go on.

It is a curious thing to see the case where we have the current thus developing its power, and the singular way in which the phenomena are brought out. Here is a piece of soft iron which I will lay at the mouth of the cylinder forming the circuit; as contact is made the iron enters it, and goes where? To the very centre, being drawn in by great power. [A bar of iron, weighing about ten or twelve pounds, was forcibly drawn out of the hand into the cylinder coil when the current was traversing it.] If I leave it to the weight of gravity it will most likely be attracted; it is kept suspended as if it had no weight, but immediately the current is gone it falls. Thus you see the influence of the current over the soft iron gives a most powerful magnetic state. It is the same as you saw in the needle, although there on a much smaller scale; other metals not ferruginous are not so influenced by the current. If I put this tin into the coil there is no attraction at all; neither is there any power under any condition of making this metal a magnet. Do not, however, suppose that this metal is indifferent to magnetism—we know it is not; and the last lecture of the course will be directed to show what is the true magnetic condition of such bodies as this. But to-day your attention is to be directed to magnetic force exhibited in iron, and similar bodies.

Now I am to take you to the general phenomena of the magnetic force evolved by the current, and to the immense quantity of powder produced when the iron is really soft, and the helix close to it. I will show it in this primitive apparatus, one of the earliest made in this place, and for which I have a great respect as to its effects, though it will not attract attention as to its appearance. This short piece of iron, which is so soft that it can scarcely retain any magnetic power, is able to take up a large bunch of filings. When the current is kept on it retains the filings, but they go down when the current is taken off. It is so with both poles;—both lose power, and the iron returns entirely to the first state on withdrawing the influence of the current. That you may see somewhat distinctly the way in which the wire accumulates its power upon the substance, I will take a piece of metal and a long wire, and make a rough magnet before you, trying it now and then, and you will easily see the way in which it rises in intensity. The wire is clothed with cotton, to prevent contact where I do not wish it; and here is a plateful of filings which serve to test it. Alone, it has no power; on putting the wire over it, it has little or no power, but on making contact the power now begins to accumulate. If I go on coiling this wire round it, you will see that the effect will increase in making this more and more perfect magnet. It is large now, and you have got the most beautiful proof of the influence of the coil. You see it is not necessary to make the coil accurately, but to give it merely a bend in a circular form in the same order. I might go on till all the effect of the iron had been brought to this single piece of metal. In this case we find that the two ends of the wire are the poles of the arrangement—one is like the north, and the other like the south end of the magnet. They will give the whole amount of the magnetic force to the iron; according as it goes round one way it makes this end north, and the other south; going the other way it makes this end south, and the other north: you always have these two poles in one or the other direction. This diagram represents this coil.

I have already pointed out, that the iron which we always use when we want to make an electro-magnet seems to receive power, and takes it to a much higher extent than steel, and the iron has the same kind of polarity as the helix. We learn from these experiments, that however the electric current gives power to another substance to a very high degree, it yet loses none of its own. It is one of the extraordinary cases which I gave you in regard to electro-magnetism, that the current, in producing in other substances magnetism, does not do so by communication, for it retains its power in an equal degree afterwards as before. This is not communication, but it is the actual production of another great power, losing none of its own. I repeat this, because it is so important, philosophically speaking, and upon it will depend many of our future statements. Here is the helix, and here the terminations of our wire, just as before; but I can here make it part of this decomposing apparatus, and then I can complete the circuit with the voltameter, which shews the current. That being a chemical force it will pass through this wire, and shew decomposition there. If it makes contact, we shall see where we have it. There is the decomposition of water into oxygen and hydrogen taking place precisely according to the force in that battery; so we have two, three, or four cubic inches of gas evolved in a certain period of time. Here are three inches, and the time occupied in evolving a certain amount of gas is an accurate measure of the power of the current going through the wires. At present this piece of steel is no magnet; I cannot lift a single nail with it. But let me put this piece of soft iron in the coil, and if I continue the experiment we obtain the same amount of gas in the apparatus. There is no destruction of the electric current, because I am simultaneously magnetizing the iron in the coil; nor is there an increase. On making contact, if we could wait, and take time, and measure these things, we should find that the current goes onward the same as before, and that in the same time exactly the same amount of gas is produced; thereby proving that nothing is lost by communication. You know, from what you saw just now, that the effect is very extraordinary, and apparently paradoxical. Let me make contact, and get this action. Whether we are creating this immense power for this iron or not, this current does not change its power in the least. If I take as much wire as will make one circle, and pass it round the iron, I shall obtain as much more as was already going there; but of that which does pass, not one particle is consumed in propagating or developing the extraordinary amount of magnetic force which has been shewn to exist in the soft iron. It is a case in which we do not understand the manner in which these forces are resolved into each other, seeing we have great production on the one hand, and no consumption or reduction on the other.

There is one experiment I must shew you—and which I should have taken up before, and pointed out—that whether we have helices or not, the polarity is the same. I have here two pieces of card. I have coiled the wire in a flat spiral, and both are placed so as to have the same arrangement. They are covered with sealing wax, to prevent contact; and when the current goes through it runs in a spiral, and the power is accumulated. These currents have attraction and repulsion; but I am taking repulsion only. I do not care to trouble you by shewing you many minute facts, and therefore I take simply the case of the production of repulsion. I have turned these helices so that their currents shall go in the same direction; for I have stated that when the current of electricity went in contrary directions, they repel each other—precisely the reverse of electricity and magnetism; they are going in opposite directions, and you will soon see the effect of repulsion when contact is made. You see the repulsion, and according as I put it the one way or the other, so will be the result.

Now I must shew you the means by which we can develope this magnetic power from an electric current. And first of all, to guide you in the clearest way possible, when we thus accumulate in the helix the magnetism of the wires, we then get a system just like the magnet itself. I have taken a very long bar, but which will serve to point out what you always have—that in the helix there is polarity. In place of a single wire we have here a coil of immense length, and we get electricity in every part in a far greater proportion. When the current is thrown into the helix, the forces are so disposed as to make accumulations at the one end and the other, correspondent to the two poles of the magnet. Here is a long bar, which is now not a magnet at all; but during the passage of the current you get this kind of action, a current at each end; and here you get the proof that the iron is not pure soft iron, by its retaining a certain amount of power on its removal; but still you get the proof that there is a polar arrangement. If I cut this bar in half, and connect it by a long wire, I shall find here and there a pole, precisely as when I broke a magnet, and found first four, then six, eight, ten, or any number of poles correspondent to the number of ends produced: thus serving as an illustration of the proper polar arrangement.

I will now take you forward to a still more curious system. Here is a very beautiful arrangement, made under my own instructions, and by which all the magnets sent to the observatories are magnetised. I take the opportunity of showing it to-day. This is a large bar of soft iron. There are four wires that bend round each other in a single helix; they are connected by these cross-bars, so that the four sets of wires turn from end to end, but always in the same direction. What I want to show you is, the amount of accumulation which we can give to our finest magnets. First of all, here are some other pieces of iron lying about the table, and you may easily see what substances I use. There will be the arrangement to make a magnet. At present the bar is quite indifferent; but I will now make it a magnet. [This was done by placing it in the coil between two pieces of soft iron.] Now look at the iron; you will find that at the end we have such a force that it bears my weight; that is by virtue of a current running round this helix. On making contact, the magnet will hold a second piece of iron [about twenty pounds at right angles]. I can now attach to it a fifty-six pound weight; and here, in addition, a scuttleful of coals. These weights are hanging by this small piece of iron. Here is an anvil, which is the largest piece of iron I could find in the house; it is also held by simple contact at one end, with great power. It also hangs on the other end. [The anvil required two persons to lift it, but it was attracted and suspended as easily as a sewing needle.] We have here an example of an extraordinary development of power: this is shewing you the effect of only a single pole. When we want to produce very great power, we make what we call a horse-shoe magnet; that is, bend the poles so that they nearly meet: this, however, is a good case of great power. Having shewn the effects in a single pole, you may conceive what this will be now. By a single pole; this magnet (a small bar magnet) holds a certain amount of iron; but by the two poles (a horse-shoe magnet) it holds double the quantity. You see the difference between the attractive power of two poles and one. This small piece of iron receives power when both poles are concerned to hold that mass; whereas, without, it will only hold a much smaller weight. Conceive what the amount would be if the ends of the bar now in the coil were made to lay hold of a piece of soft iron. I shall have to shew you a magnet of much higher power than this, having the horse-shoe form. Whilst on the magnet I might as well shew the curious way in which these powers are grouped. Here is a mass of filings in a plate, and I now attach them, altogether, on the end of the magnet. Mark how it hangs. [The plate was forcibly drawn and fixed to the end of the bar by the iron filings.] I could not pull the plate away, though I might break it. Here is a piece of chain, every link of which has become a magnet, and it is quite a different body from what it was before. Each link is in a separate magnetic condition, and acts with its poles; there is an infinite number of magnets. [The iron chain appeared while suspended in a mass to acquire a pasty consistency, and admitted of being kneaded into any shape.]

Now this magnet will enable me to show you one or two very beautiful phenomena, and I shall take the opportunity of doing it now—as, for instance, the power of induction. If I take a piece of iron, and hold it near the bar magnet, it becomes a magnet. You see the magnet is not touching, and the further I carry it off, the more power it loses. [A piece of iron was attracted by induction and dropped off as the magnetized piece was withdrawn.] Again, you see every needle on the table is telling its own story. [All were in rapid motion, even at five feet distance, by the magnetic influence.] If I had a greater power all the needles in the room would be moving and the balance wheels of watches at a great distance would be affected. Again, let us examine that curious repulsion I told you of, which is so like electric force. Here are two pieces of soft iron, not even attractive; but make them magnetic, and the lower ends become similar poles, and they repel each other. Just as electricity repels similar bodies, so here similar poles repel each other. I might show this in another way.

This large helix was formed for the purpose of making other magnets, and is perhaps the finest specimen of apparatus for the manufacture of a magnet, because it is so made that it gives a proper and equal distribution of the power when applied. I am going to show you how we make magnets. In order to magnetise the needles for the observatories, they are put thus between two pieces of iron which make a compound core. I shall take this bar, and put it in between the two pieces. When we take the whole together, and put it in thus, the bar will get the whole of the magnetism, and then we bring the poles equidistant. When once the inductive force comes from the helix upon this arrangement, that piece of steel, however hard in the centre, is sure to be magnetised to supersaturation by this instrument. We take steel of the best kind, in order that it may retain its power. We give a blow, and the magnet is now made. Very often one portion of the core will actually pull the other portion out. I have as strong a magnet as the steel will make. This illustrates the power of the artificial magnet in making others, and the mode in which magnets are prepared for sending them abroad to various observatories.

I will now take you to another disposition of power, that you may see the character of the magnet under another form. Here being the magnet, I am about to cover it over, to hide it, in order to show the influence in space around it, and to point out the direction of those magnetic curves of force of which I have already spoken, and which we can easily produce and render invisible in this case. Here you see that we can make contact when we please. I make this a magnet; but am about to show you the effect it has in forming the curves, which I can do pretty well in this way—by covering over this piece of mill board with a sheet of paper, and scattering nails or other indicators upon it, that will serve to show the condition. At present contact not being made I have cast down these nails, and they fall on the paper *ad libitum*, under no influence but that of gravity. But then, as you have seen, you may expect they will be influenced by the magnet, when it comes into action. Contact has been made; you see the arrangement the nails take. If I tap the board you see the arrangement of certain lines and curves of power: here are two centres of force, or two poles, and you see clearly the radiation of lines indicated by the nails arranging themselves in that horizontal plane, and as the indication shows you, the same takes place equally on a vertical plane, supposing that the nails could be supported in the air against gravity. I should not wonder, if I were to take some of the nails, and build up a system, and make it visible to you, so that as you perceive we may in some degree build up these lines in the air. The nails were attached one to another, and tended to build up an arch between the poles. You see the striking effect. Now and then in accidental arrangement we may actually raise them into the air five or six inches. This shows you, as well as the diagram, how the force is disposed with regard to the poles of the magnet. Now, you see the lines of nails which indicate the direction of the lines of force, and I will transfer your attention from these to the course of the rope suspended in this room (in the magnetic dip). You will perceive these are to the magnet beneath as the rope is to the arrangement, that the same kind of lines of force run through, and upon, and into, and above the earth, having this general form, and which, in this part of the world, may be represented by the direction which the rope takes (nearly vertical). These are therefore the magnetic curves, and they represent the lines of force which go from pole to pole.

Now, after showing you these experiments—and I might take a great deal of time to show you others, but I want to deal with principles rather than a variety of facts—I think I must next point out that you get none of these effects with other metals than iron, nickel, and cobalt. As copper and tin cannot be made to attract iron, so iron cannot be made to attract copper or tin. There is not the least power in this great magnet to attract lead, copper, tin, or other metals. I point it out, to show the extraordinary separation between metals not magnetic, and those that are. These metals are not, however, indifferent; they have a magnetic condition, but it is not that which iron has, nor anything like it. This will be a subject of demonstration hereafter.

I will now take your attention back for a short time to the electric machine, for the purpose of again impressing upon your minds what I before stated regarding the identity of this condition of electricity and the electricity of the magnet, for they are perfectly identical in force and character as respects all the phenomena you have seen to-day. I have placed the battery of Leyden jars (a plate battery of the largest size) in the adjoining room; I have put up the galvanometer, and made an arrangement to charge the Leyden jars there, and I shall connect one of the wires with the ground here. When the charge is made I can send it through the galvanometer that I have here with all the violence of the discharge from this large collection of Leyden jars, and I think you will be surprised at the smallness of the effect produced. In watching the galvanometer we see that it swings, but mark how little. The end is towards my right hand; it is coming back, because it is stopped. At the time I made the discharge, there was a little power that perceptibly affected the galvanometer; every time I send the electricity, developed through the instrument, I get an additional swing of the needle. I do not pretend to show you a large amount of action, but I show identity, which is the great point. The effect is the same as if a very weak magnet had been brought near.

In order to show that the effect really is the same, I will take any of these helices, and use them for the purpose of making this communication. I shall have power to send this current through a helix, and then you will find I shall here have the same ability to form a magnet, but still a very feeble one. Here are the helix, the needle, and the magnet. I will take one of these bars, or needles, at present not magnetic; but I had better test them. I find that these needles have all become more or less magnetic by virtue of the quantity of magnetism about the table (by induction), and therefore I cannot show you a true case. I might perhaps be able, if I happened to hit the right direction, to reverse the magnetism. If I put it in here, and then send the discharge through the helix, if that needle had not been a magnet, it would have become one by accumulating the power through the helix. It is still attractive.

I will now turn the needle round, and see if I cannot undo what has been done. If I put the needle in this direction, I hope I shall find the magnetism reversed; but the quantity of electricity about us is so great, and that which I want is so small, that it is hardly sensible in comparison with the rest. There is another discharge through the iron, and I am glad to see that it repels. I have charged the magnet by taking the current in a reverse direction, and using nothing but the current of electro-magnetism. I bring you to this point to repeat the remarks I made regarding the enormous *quantity* of electricity present in a little water, compared with other things. I told you the other day, that a grain of water contained electricity equal to 800,000 discharges from that large electrical machine. Let me show you what a grain of water is in its elements. It consists of eight parts of oxygen, and one of hydrogen. Where are these gases mixed. I have as much as eight cubical inches of gas, which is equal to more than one grain of water; so that I have more than one grain. I can cause these elements to combine. There is the combination: at the moment of their explosion the chemical affinity of the oxygen and the hydrogen was such that the eight cubical inches of gases became one grain of liquid water. What I affirm is, that at that time chemical power equivalent to an electrical force, equal to 800,000 discharges from that battery, was in action. Many of my philosophical friends have said they could not comprehend what that meant; I will explain it. The voltaic battery depends upon the affinity of one of the elements of water for zinc; and we put into the battery zinc, iron, and platinum, and then we get our battery. Now the point I want to give you is this, that at the time we have decomposed by the chemical affinity of oxygen for zinc a single grain of water in using the voltaic battery, we have sent electricity equal to 800,000 discharges from that large battery through it. We have no difficulty in comparing the force of the voltaic battery, and the force of the Leyden jar, because we can measure the quantity of water decomposed, or the quantity of gas which the current produced; but they all agree in telling the same story whether we measure them magnetically, electrically, or chemically, from the gases. When we have formed one grain of water, or decomposed one grain into eight inches of gas, we get electricity equal to 800,000 discharges from that large electrical battery. It requires some thought to receive this as a comparative idea, that when that gas was combined in that little vessel, there was as much electricity concerned in the form of chemical affinity as was equal to 800,000 discharges, like that which you have seen and heard.

CLINICAL LECTURE ON A

CASE OF CARDIAC DISSECTING ANEURISM,

Delivered at King's College Hospital,

BY DR. TODD.

We have lately had a case of a very remarkable lesion of the heart, which I think highly worthy of your attention, not only as an object of interest, but also as one which may suggest some reflections of practical importance.

E. Smallwood, æt. 36, a woman of intemperate habits, accustomed to drink three or four glasses of gin daily, with a considerable allowance of porter.

Three months ago she began to suffer from dyspnœa, which assumed the form of orthopnœa. For this she was bled to 16 ounces without any benefit. Latterly she has spat blood on several occasions. She has likewise suffered greatly from a very irritable state of the stomach and bowels.

She never had rheumatism, and there is nothing in her history, except her intemperate habits, to explain the occurrence of the dyspnœa, which appears to have come on quite suddenly.

On her admission her dyspnœa was extreme; she sat up in bed panting for breath; she was sleepless, and raved a good deal; she was deeply jaundiced; had ascites and slight enlargement of the liver, without any large abdominal veins; her lower extremities were anasarcous; pulse feeble, 112; tongue furred and dry; slight diarrhœa.

There was no preternatural dulness over the precordial region, nor was the heart's impulse unnatural. What attracted attention most was, a loud and soft bellows sound accompanying the systole, and heard very distinctly at the heart's apex. This sound was likewise heard behind at the angle of the left scapula, but here it was much more feeble than in front. There was likewise a loud bellows sound at the base of the heart, which took the place of the natural click of the second sound.

The former sound was evidently systolic, situated in the mitral orifice, and due to an imperfection of the mitral valve, which admitted regurgitation into the left auricle. The latter sound was in the aortic orifice, and from its replacing the second sound I had no hesitation in coming to the conclusion that it was diastolic, and was occasioned by some imperfect state of the aortic valves which allowed a regurgitant current into the ventricle.

Here let me remark to you, that in seeking to determine the place at which murmurs are produced in cases of heart disease, you must not trust too much to comparison as to the time of their production, with that of the pulse at the wrist. The interval between the systole and diastole of the heart is scarcely appreciable, and so, between a diastolic cardiac murmur and the pulse at the wrist, there is rarely to be detected a satisfactorily appreciable interval. If you trust to this you will be constantly falling into error, and, indeed, some good auscultators who examined this case mistook the diastolic aortic murmur for a systolic murmur from this very cause, because they could detect no appreciable interval between the murmur at the heart and the pulse at the wrist.

The best modes of deciding the locality of these abnormal sounds are—1st, to determine at what part of the chest they are best heard, whether over the sternum at its junction with the third rib, or below the nipple between the fifth and sixth ribs on the left side; 2d, to ascertain their relation to the normal, systolic, and diastolic sounds of the heart.

If a sound be best heard over the sternum, and do not interfere with the normal diastolic or second sound, which is best heard in that locality, it is a systolic aortic sound unequivocally.

If such a sound usurp the place of the normal second or diastolic sound, it is a diastolic aortic, or regurgitant sound, unequivocally.

In the former case there is aortic obstruction, either from valvular disease, or disease of the coats of the aorta, or there is an anæmic state. In the latter case there is aortic regurgitation from valvular imperfection.

If the sound be heard best at the apex, and if it accompany the normal systolic sound, interfering with it, or being itself interfered with by it to a greater or less extent, it is certainly a systolic sound caused by regurgitation of blood through the mitral orifice, accompanying the systole of the ventricle. The diagnosis of the true locality of this sound may often be assisted, if you detect it beneath the angle of the left scapula; but you must not trust to this alone, for a sound of this kind may be produced in an aorta rendered rough by many atheromatous and earthy deposits, and moreover a true systolic mitral murmur may, and frequently does exist, although inaudible at the back.

Mr. Sibson, of Nottingham, who lately visited this hospital, pointed out to me a simple way of analysing a mitral systolic bellows sound, so as to distinguish the murmur from the normal impulse sound. This is done by merely interposing a card, or a very thin piece of wood or ivory, between the stethoscope and the chest. By this arrangement you may frequently hear the murmur alone, distinct from the impulse sound.

You will sometimes, but not often, have to make the distinction between a bellows murmur in the mitral orifice which is systolic, and one which is diastolic. I say not often, for the latter kind of murmur is of very rare occurrence; a fact which is, I think, partly explained by the feebleness of the contractile power of the auricle. It is therefore only in cases where the mitral orifice is reduced to a very narrow chink, and where there is, at the same time, considerable hypertrophy of the auricle, that you meet with a bellows murmur. This murmur is synchronous with the ventricular diastole, and therefore is called diastolic.

How are you to distinguish this murmur?

The best rule I can give you is to discern its relation to the systolic impulse; if they clearly occur at different times; if you find the bellows sound appear to terminate in the impulse sound; if, in addition, you gain no assistance in analysing the two sounds from the method proposed by Mr. Sibson, you may set this sound down as a diastolic one.

Now I was led, as you know, to look for a mitral diastolic sound, in the case we are now discussing, from certain symptoms which the woman exhibited. These symptoms were, the urgent dyspnœa, which formed so early and so prominent a feature in her case, and the frequent expectoration of blood; also the existence of a pulmonary apoplexy, which we were led to infer from having detected bronchial breathing and bronchophony over a limited space behind on the right side.

It was plain that there was great disturbance of the circulation in the lungs, and as this great derangement of the pulmonary circulation is most frequently concomitant with a contracted mitral orifice, I was led to look for that lesion and for a mitral bellows sound of the diastolic kind.

There can be no doubt that a lesion of the mitral valve might at once obstruct the flow of blood from auricle to ventricle, and at the same time prevent that perfect closure of the mitral orifice which is necessary to prevent regurgitation.

But we could not detect a diastolic murmur referrible to the mitral orifice. It might, indeed, have existed, but have been masked by the systolic murmur, which was extremely loud.

Another circumstance, in addition to the dyspnœa and hæmoptysis, which led me to look for mitral contraction here, was the jaundice. There is no condition of heart which is so prone to develope jaundice as this; and it is not improbable that the reason of this is, because much too much work is thrown upon the liver by reason of the congested state of the lungs.

The existence, however, of such a lesion of the aortic valves as would admit of regurgitation through the aortic orifice would suffice to impede the passage of blood through the mitral orifice; and more especially if it were co-existent with such an amount of lesion of the mitral valves themselves as admitted regurgitation through that orifice. A moment's reflection upon the course of the circulation through the heart will convince you of this. And it may be added, that where great regurgitation takes place at the aortic orifice, a very slight lesion of the mitral valves may lead to considerable regurgitation through the mitral orifice.

Hence, then, all the phenomena which would result from a contracted mitral orifice might be induced by a regurgitant lesion of the aortic valves, and more especially if accompanied by a similar lesion of the mitral valves, even though it might be one of limited extent.

Another phenomenon which attracted our notice in this case was the peculiar bounding pulse. In this kind of pulse the artery appears to yield more than usual under the propulsive force of the heart; and immediately afterwards a great collapse takes place, owing to the return of a considerable portion of blood back into the ventricle. Accompanying this state of pulse, and due to the same causes which give rise to it, there is an unusual tendency to a displacement of arteries during their systole. This is best seen in curved arteries; or, by bending the arm, you may see it well in the brachial artery: there is always likewise in cases of this kind a great throbbing of the carotids at the base of the neck.

This kind of pulse always occurs when there is regurgitant disease of the aortic valves, and you may often diagnosticate that disease from the existence of such a pulse only. But you must not trust to this sign alone, because in very weak and debilitated persons, after profuse hæmorrhages, and in the last stage of certain exhausting diseases, a similar state of pulse is frequently met with, and it is quite consistent with a perfect state of the aortic valves.

The diagnosis in this case, then, was as follows:—

First, there could be no doubt of imperfection of the aortic valves, such as to admit regurgitation.

Secondly, there was mitral disease sufficient to admit regurgitation, but from the early and great dyspnœa and hæmoptysis, and the jaundice, I was prepared to expect contraction of the mitral orifice, sufficient to impede greatly the passage of the blood from the auricle to the ventricle. I should have been quite decided in this view if I had found a mitral diastolic bellows murmur.

The poor woman lingered on for a few days. Her urine was very scanty, and loaded with bile, and albuminous; it was not unlikely, therefore, that she suffered under renal as well as hepatic and cardiac disease.

Upon examining the body, the following appearances were observed.

The lungs were much congested. A small apoplexy, as large as a moderate-sized walnut, was found in the middle lobe of the right lung, close to its surface. There was a slight deposit of lymph on the pleura covering this apoplectic effusion. This, you will remember, corresponded to the situation where we heard bronchial breathing and bronchophony during life. There was dilatation of both the right and left ventricles of

t, and slight hypertrophy of the left
e.

nitral valves were less diseased than
anticipated. There was a distinct
ng of their edges, quite sufficient to
that perfect adaptation of them
s necessary for the complete closure
rifice; quite sufficient, therefore, to
gurgitation. At the same time, I
y that I do not think there would
en so much mitral regurgitation in
e as there evidently appeared to be
e intensity of the mitral murmur,
not for the great regurgitation at the
rifice.

ooking to the aortic valves, we found
valves themselves were healthy, but
remarkable channel had been formed
the attached border of one of
establishing a new communication
the ventricle and the artery; this
s that which occupies the central
when the aorta is laid open in the
way by cutting along the left of the
of the ventricles. The little finger
sily be passed from the ventricle
aorta, or in the contrary direction,
this channel.

rifice was formed in the ventricle
ree or four lines beneath the attached
f the valve, apparently by a process
tion. This orifice not only led into
nel already referred, but also into a
aneurismal pouch, large enough to
a small walnut. This pouch pro-
nto the right auricle just above the
attachment of one portion of the
l valve.

u look at the healthy heart, you will
perceive the precise place of this
n, and how little power there is in
t of the heart to resist the pressure
lood after its lining membrane has
ded by any morbid process.

lace at which the aneurism occurred
bove the fleshy portion of the ostium
m of the ventricle, in the interval
the fibrous festoons which give
ent to the right and the middle semi-
lves. In this situation the wall of
rt consists only of the lining mem-
supported by some areolar tissue
es upon the wall of the right auricle,
r the fibrous zone which separates
nd ventricle.

is situation you may easily, in the
heart, push a probe from the left
into the right auricle. The auri-
ll is extremely thin, consisting of
ght layer of muscular fibres and the
embrane of the auricle.

not to be wondered at, then, that
orroding process had destroyed the
membrane of the ventricle in this
a pouch should have been found projecting into the right auricle. This pouch made a considerable projection, and must have encroached upon the auriculo-ventricular orifice, but scarcely to such an extent as to have caused any material impediment to the flow of the blood. It contained laminated coagula, which nearly completely filled it, and contributed materially to strengthen the wall of the auricle against further encroachment.

The occurrence of both the channel and the aneurism admit of easy explanation. You perceive numerous spots of an opaque deposit in the aorta, on the lining membrane of the heart, and on the mitral valves. These spots are composed of the material long known as *atheromatous*, which contains a large quantity of fatty matter, cholesterine, and other substances. The deposition of this material in any quantity interferes with the healthy nutrition of the lining membrane, which wastes by a process similar to ulceration, but without forming pus. The wasting extended in this case to the attached border of the valve, which, under the force of the recoil of the column of blood driven into the aorta, gave way, and a passage was established through which a considerable stream of blood regurgitated into the ventricle at each diastole of the heart. I have already shown how the weakening of the wall of the heart by the corrosion of its lining membrane at a place naturally ill supported, gave rise to the formation of the aneurismal pouch.

We have, then, in this case, the combination of a two-fold lesion, an aneurismal dilatation by failure of one of the elements of the cardiac wall, and a *dissecting aneurism* analogous to that which is more commonly met with in the aorta and other large arteries. Had the lesion been limited to the aneurismal pouch, it is probable that the woman would have experienced little or no disturbance of the circulation. It was the dissecting aneurism which caused so much derangement of her cardiac circulation by allowing so free a return of the stream of blood into the heart.

It was this dissecting aneurism, too, and its accompanying regurgitant stream of blood, which caused the loud diastolic bellows sound in the mouth of the aorta. It is plain to any one who examines the preparation that there was nothing to produce a systolic bellows sound in the aortic orifice, for the margin of the opening into the aneurism, although jagged, was smooth towards the ventricle, and was not likely to catch any portion of the systolic stream, more especially as in the contraction of the ventricle this opening would, in all probability, have been much diminished in size.

In reviewing the various features of this case, it cannot fail to strike you as one of

those which display in a remarkable manner what is the power of diagnosis which the careful observer may acquire from symptoms aided by physical signs. It is this; that he may determine very generally with exactness wherein the mechanism of the circulation through the heart is deranged. He may determine, for instance, whether there be aortic regurgitation or aortic obstruction, or the same with respect to the other orifices; but what the precise lesion is which so disturbs the course of the fluid in the heart, and prevents the proper action of
its floodgates, cannot always be
tained.

Aneurismal pouches in the walls c
heart are not of very frequent occurr
I may refer you to an excellent acco
this form of lesion by Dr. Thurnam, n
York, in the 21st volume of the M
Chirurgical Transactions. These po
occur principally in the left ventricle,
less frequently in the left auricle, and
in the right cavities. The rarest fo
that where the lesion produces the diss
aneurism.

FIG. 1.

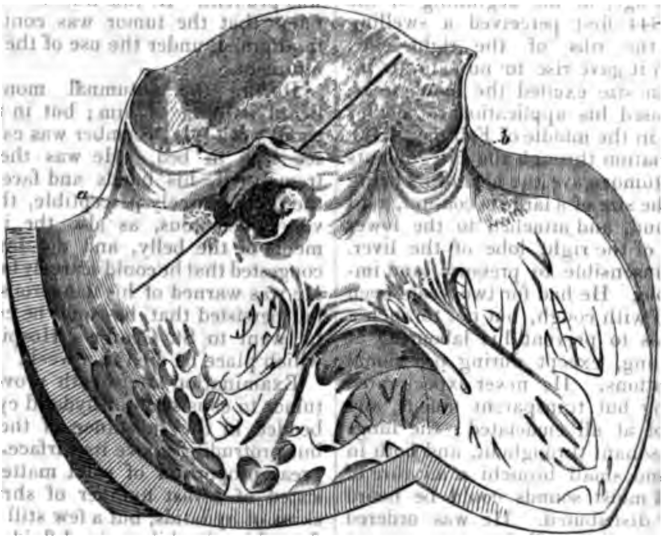


FIG. 1.—The left ventricle and aorta laid open.

a. Ulcerated opening leading into the aneurismal pouch, and into the channel through which a probe has been passed.

b. The middle aortic valve which is det
at its convex border by the cor
process, and behind which regurgit
took place through the channel in
the probe lies.

FIG. 2.

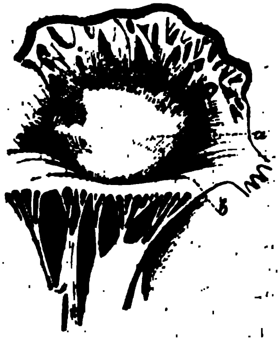


FIG. 2.—The right auricle laid open, to shew the projection of the aneurism into it.

a. The projection of the aneurism.

b. A portion of the tricuspid valve.

The treatment of this case consisted
gether in the use of means directed to r
the distressing dyspnœa under which
patient laboured. Ether and opium
found of great service, but, as you reme
we found it necessary to proceed cauti
with the latter drug, as the characte
signs of its influence, contracted pupil
great drowsiness, became quickly ma
In all cases of dyspnœa connected
impeded circulation, and consequently
gested lungs, it is a maxim, of whic
practical men know the great import
to be extremely cautious in the use of
cotics, but especially of opium.

The annexed drawing was kindly ma
Mr. Brinton from the preparation.

ıginal Communications.

CASE OF

ID CYST OF THE LIVER;

WITH REMARKS.

HOMAS K. CHAMBERS, M.D.

---

brawny labouring man, fifty
age, at the beginning of the
H first perceived a swelling
he ribs of the right side.
it gave rise to no pain, its in-
size excited the man's fears,
ıed his application to me for
n the middle of February 1845.
ıtion through the integuments
ımor gave the idea of its being
: size of a large cocoa-nut, hard
d, and attached to the lower
f the right lobe of the liver.
sensible to pressure, and im-
. He had for two years been
with cough, but not to such a
ı to prevent his labouring at
ng, except during occasional
ions. He never expectorated
but transparent mucus, and
at all emaciated; the lungs
ınant throughout, and both in
d small bronchi a mixture of
moist sounds could be heard
listributed. He was ordered
to the swelled part night and
an ointment composed of
mercury, iodide of potassium,
which he continued to use for
ht, when the gums becoming
inflamed, the iodide of mer-
s omitted, and unguentum
comp. used alone. Blisters
lied to the chest with relief to
ı.

: 13th of March the tumor was
: smaller than a month pre-
while the centre was soft and
ɔ pressure. The patient was
o continue the ointment, and
her medicine but pills of aloes
ll, which, with frequent blis-
e most relief to the cough.
; later in the spring the pec-
ɔrders became worse, and were
s accompanied by so much
and inflammatory fever as to
ıleeding.

e 1st of May I observed the vesicular murmur was weak in the lower part of the right lung, and that there was a sound of pleuritic friction in the same place, but no dulness on percussion. During the summer the legs became dropsical, there was some degree of orthopnœa, and the pulse was small and weak as compared with the action of the heart. Remedies, however, so far reduced the dropsy, that he was enabled to work by nursing a day or two now and then, and he considered himself perhaps less of an invalid than was prudent. At this time he felt confident that the tumor was continuing to diminish under the use of the iodine ointment.

During the autumnal months I heard nothing of him; but in the second week of December was called to see him in bed. He was then extremely ill, his hands and face livid, the pulse scarcely perceptible, the legs very œdematous, as also the integuments of the belly, and the lungs so congested that he could scarcely breathe. He was warned of his dangerous state, but persisted that he could be cured if he went to St. George's Hospital, in which place he died in a week.

Examination after death proved the tumor to consist of a hydatid cyst imbedded in the substance of the liver, but protruding above its surface. The great proportion of solid matter consisted of a vast number of shrivelled skins of hydatids, but a few still plump floated in the bile-stained fluid of the tumor. A careful search with a microscope failed to find any Echinococci. The liver was otherwise healthy, but there was an adhesion of it to the transverse colon, and some fluid with shreds of lymph in the peritoneal sac. Both pleural cavities were obliterated by old adhesions, and there was some clear serum in the right. Throughout the subpleural cellular tissue there were scattered white tubercles, from the size of a shot to that of a bean, mostly disk-shaped, but some round and prominent. They were harder than cartilage, and translucent when cut in a thin slice. Examination under the microscope shewed their minute structure to be closely similar to intercostal cartilage. Similar tubercles were scattered in smaller numbers throughout the substance of the lungs. Each tubercle was inclosed, as a kernel, in a deposit of black matter, which stained its circumference, and its substance to some depth. None shewed the slightest tendency to softening or change of structure. The whole of the pulmonary tissue was much congested, and in parts hepatized. The left heart was quite healthy, but the right was considerably dilated.

The chief interest in this case rests on the fact of the growth of the tumor being arrested by the use of iodine applied externally, whilst its nature was shewn by a post-mortem examination. Cases are so rare in which the efficiency of a remedy is exhibited, and at the same time the diagnosis proved to be correct by actual inspection, that in spite of the want of novelty, the history appeared to me worth recording. I do not know of a similar union of these circumstances in any printed instance of hydatids, except in a case of Dr. Seymour's, quoted by Mr. Cæsar Hawkins in the eighteenth volume of the Medico-Chirurgical Transactions; but the frequenters of St. George's Hospital may remember a boy named Foy, also under Dr. Seymour's care a few years ago, who attracted attention by having an enormously swelled belly, which got smaller several times under the use of iodine and bromine, and in whom hydatids were found in the peritoneum when he died of peritonitis after an injury.

The cartilaginous tubercles found in this patient's lungs have some peculiarities in their character that may be worth noting. They are more inclined to infest serous membranes than other structures, being very commonly found in the peritoneum, and producing the disease called "Baron's disease:" hence in this case they were thicker strewn in the subpleural tissue than in the substance of the lungs. They are not so much disposed to change of structure as other tubercles: hence they do not, like the less organized growth, soften and break down into vomicæ. With this is probably connected the fact, that they do not produce phthisis, the diseases arising from them appearing solely due to the irritation of their presence. In the present case, the series of the disorders by means of which they proved fatal appears to have been as follows: irritation and vascular congestion of the lungs, chronic impediment to the passage of the blood, consequent dilatation of the right heart, dropsy, œdema of the lungs, and death from dyspnœa. This is a course very different from that run by scrofulous or unorganized tubercles, and demanding a very different prophylaxis and treatment. They are propagated by cells; but as these become obliterated when the cartilaginous texture is fully formed, there is some difficulty in seeing them in the human subject, where, of course, we only see the structure in an advanced stage of growth. Pigs, however, are luckily subject to Baron's disease, and in the peritonæa of those killed in apparent health, it may often be found in an incipient stage. In these membranes I have observed little opaque specks, just visible to the naked eye, which, when examined under a microscope, proved to be aggregations of vesicles, some containing clear fluid, others a few smaller vesicles, others filled with granular matter. These can be nothing else than young tubercles, and are probably the form in which the more highly organized ones commence, as well in man as in the pig. In this I believe them to differ from the common opaque scrofulous tubercle, the materials of which, in a granular form, are usually thrown out on the surface of mucous membranes, and are sometimes even found ready formed in the blood.

1, Hill Street, Berkeley Square,
Aug. 17, 1846.

ON THE

TREATMENT OF BURSAL DISEASE OF THE KNEE-JOINT.

By F. C. Skey, Esq., F.R.S.

I beg to transmit the result of my observation, chiefly confined to the out-patient room of St. Bartholomew's Hospital, on the management of a form of chronic malady, the treatment of which has been always found both tedious and imperfect: I mean preternatural enlargement of bursæ, with chronic thickening. My remarks relate more especially, but not exclusively, to that form of this disease which affects the bursa placed on the patella, and on the ligament below it, commonly known under the title of housemaids' bursa. To those who

nt public hospitals, I need not
at it is a very common malady,
hat its presence is a source of
inconvenience to the subject of
he movements of the joint are
red, even in its most chronic
while it is liable to occasional
s of inflammation that are pro-
e of great pain, and some injury
health. The knee, in this con-
, is incompetent to form a sup-
to the weight of the body in
ttitude of kneeling, by reason of
echanical form of the swelling.
often approaches that of a
; and the liability to inflamma-
of the tumor, consequent on
re. To individuals in the rank
who are the more general
ts of this disease, and who are
dent for their livelihood on the
of their bodily health, these
es become important, and even
s; and such may surely be
d the proper objects of careful
mental surgery. The treatment
y employed is either palliative
nanent. The first by counter-
on, the second by excison. The
ive is tiresome and inefficient;
rmanent, by excision, may have
ardonable, or even creditable,
6, but in 1846 is barbarous. In
alliative, the agent in general
ion is repeated blistering; and,
. Candour might be supposed to
we all know the prospects ful-
by that remedy." It is very
that in the earlier stages of en-
bursa, some benefit may be
ted even from a blister, but in
lvanced form of the disease I
I am borne out by the observa-
most surgeons, when I say that
tedious and perfectly inefficient
; while, on the other hand, the
on of excision is an unnecessary
on of severe pain, not unat-
with danger—danger directed
the knee-joint, but to the con-
n, coming under the class of
ons of expediency, which are
njurious to the health of the
ual, and are occasionally fatal

bursal disease of the knee pre-
self for treatment in the form of
al swelling of the sac, contain-
ous or puriform fluid. If unat-
with pain, the contents will
ly be serous merely, and the
tumor soft. It is in this stage that blistering may be unobjectionable. As the disease advances, the mass consolidates by repeated attacks of inflammation, more or less acute, till the swelling becomes a large tumor of nearly solid consistence. In the early stages, the fluid contents readily convey the sense of fluctuation to the hand; in the latter, there is neither fluid nor cavity; the walls are consolidated by lymph, and the cavity, though not absolutely obliterated, is reduced to a mere fissure, in size less in proportion to the mass than the cavity of the uterus to the entire organ in early life. This conversion of a small sac into a tumor as large as a moderate sized orange is probably the result of the uniformly chronic nature of the inflammation that has attended its progress throughout; for the effect of an attack of inflammation, if acute, is to pass readily into suppuration, or if chronic, to produce serous effusion into the cavity. The latter is the more common result. When the cavity is once distended with serous fluid, it generally retains the condition of a sac throughout its progress; the walls may be more or less solid, but the fluid continues sufficiently aqueous to convey the sense of fluctuation to the finger. When an attack of inflammation reaches the suppurative stage, it generally terminates by obliteration of the sac, provided the abscess be punctured. This puts an end to the disease, as in the case of a common abscess.

There exists in the minds of many professional men a deeply rooted aversion to the puncture of a bursa; a fear of formidable inflammation extending to the neighbouring joint, the destruction of which is among the anticipated results. This is an old opinion, adopted by the surgeons of a former age, at a time when both surgical and physiological science were at a less advanced stage, when men generalized on a few cases, and when the profession looked up to a few men as the sole authorities of the day. The same remark will apply to certain errors in anatomy, dating from a period in which dissection was restricted to a comparatively few bodies. Men generalized on irregularities of distribution, and made them common. Among such descriptions may be included that of the communication of bursæ with the contiguous joint, any operation on which would be very objectionable. But such communications are exceedingly rare, nor can I call to mind any example of the kind, except that between the tendon of the subscapularis muscle and the shoulder-joint, which might rather be deemed an extension of the synovial membrane of the joint under the tendon. That also between the tendon of the semi-membranosus muscle and the knee-joint is occasionally found, but only occasionally.

Diseased bursæ, not communicating with a joint, may, I believe, be opened without danger in all situations, and in every stage of their disease. The cavities of the body, when morbid in condition, appear to be exempt from the often frightful consequences of puncture, or other form of injury, that may attack them during health. An accidental puncture into any of the larger joints is often fatal to the articulation; acute inflammation follows, destruction, and finally anchylosis. A diseased joint, on the other hand, may be punctured with impunity, and often with great advantage; of the benefit of which operation I could quote many examples. The getting rid of a quantity of fluid distending the cavity of a morbid joint is conferring a great boon on the joint, of which I may mention one example. In the year 1835, a girl in St. Bartholomew's Hospital had disorganization of the knee-joint, from long standing synovial disease. The limb having been condemned, I obtained permission of the surgeon to try an experiment with the case. I punctured the joint by a small incision. An ounce of sero-purulent fluid escaped, attended by great relief from pain. At the expiration of a week I again punctured it with benefit; and a third, fourth, and fifth time, and always with relief; the quantity of fluid that escaped diminishing at every operation. At length the fluid ceased to be secreted; anchylosis was established, and the girl recovered with a stiff knee. Many similar examples have since occurred to me; and I question whether it be not always desirable to evacuate the contents of a joint, disorganized by synovial disease, previous to amputation, when in any degree distended with fluid. The same principle applies to the bladder. We cut into a bladder for stone, the mucous lining of which is in a state of chronic inflammation. If the organ be in a yet more advanced stage of disease, I believe we have still less reason to fear the consequences. Can we contemplate without fear the result of an incision into a thoroughly healthy bladder under any circumstances? and yet inflammation of the organ consequent on lithotomy is rare. In the year 1838, a young healthy man came into St. Bartholomew's Hospital under the following circumstances. He was about, as he said, to "change his condition," but having some anxiety on the subject, caused by a previous attack or so of gonorrhœa, he applied to the doctor for a certificate of health. The doctor deeming the urethra the vulnerable region, passed an elastic catheter, No. 7, into his bladder with much success, in the withdrawal of which, however, he was not so fortunate, for he left half the instrument behind him in the bladder. The man complained of neither pain nor inconvenience. I declined to operate till his symptoms demanded it. Many days elapsed, and still no suffering, and not even the consciousness of the presence of the catheter. On the tenth day he became uneasy, and the uneasiness amounted to pain on the twelfth day, when I removed it by the lateral operation. But even here the shock was considerable. I was sent for by the house-surgeon early on the following morning, who reported that the man was suffering from severe inflammation of the bladder, which I believed to be impossible.

I found him with a full bounding pulse of 120, profuse perspiration, and tenderness on pressure over the whole abdomen. The wound was free from coagula, and the urine flowed freely through it. I referred to the several students individually with a view to ascertain the course each would pursue had the case occurred under his responsibility. With one exception, all said the man had inflammation of the bladder, and should lose blood; one only doubted the existence of inflammation. I ordered the man a full dose of opium and ammonia. He fell off to sleep, and on awaking some hours afterwards, his pulse had fallen to its natural standard, and he had no other bad symptom.

The subject of "false symptoms," put forth by the freaks of the nervous system has been fully and formally introduced to the profession in the admirable work of Mr. Travers, yet I know of no authority who has distinctly defined all the marks of true inflammation following injury; and more particularly is it important to direct the observation of the student to the necessary lapse of hours before inflammation can possibly exist. That nature has a law is, I think, indisputable.

To return to the subject of bursæ. If such amount of inflammation be excited in a diseased bursa as will produce suppurative action, an abscess will form which may be brought to a crisis if necessary by puncture: but in soft or fluid bursæ this crisis is not requisite. The effect of a thread passed through the sac is similar to that of the same agent in the case of hydrocele or ranula, viz., the secretion is absorbed without being discharged by a wound, and the cavity is obliterated. But in the hard and consolidated form of the disease the effect of the thread is that of producing suppuration. The hard mass, as it were, breaks down into a common abscess, which, when punctured, discharges its contents, and heals. In this manner I have treated diseased bursæ for many years with success. A common thread of silk should be passed through the centre of the tumor, especially so in the hard form, in order to insure its including the central cavity, for this I believe to be necessary. The time it should be allowed to remain will depend entirely on the effect produced. Occasionally the tumor shows great indifference to its presence; at other times, and in other persons, smart inflammation follows, accompanied with considerable pain, in the course of a day or two. The inflammation may extend over the front of the joint. The thread should then be removed, and the knee fomented or poulticed; and from that period the disease may date its onward march towards a final cure. Nothing can be more satisfactory than the steady progress these cases generally make. When the bursa is large and hard the thread should remain until a good deal of inflammation is produced, even though suppuration be established, which will be indicated by the oozing of pus from the punctures. The thread being then removed, either the abscess will become more matured, and demand relief from the lancet, or the whole mass of the disease, now become fluid, will undergo gradual absorption. I have cured many cases in the early stage in three weeks, but they more frequently require a month or five weeks, particularly when the absorption of a large mass of lymph forms a necessary part of the process of cure.

When the morbid bursa is situated too deeply to allow of the application of the thread, the means I have resorted to have been injection and pressure. Such a locality is the tendinous insertion of the semimembranosus muscle, underneath which a bursa is invariably found. This bursa is obnoxious to chronic enlargement, but unattended with thickening. The pressure of the tendon in the extended position of the leg, by forcing it outwards, gives it a more or less elongated form, and it is moreover coupled with this other peculiarity, that unless very large it disappears when the leg is in the flexed position; but when extended the bursa is carried outwards in the form of a hard round tumor, occupying the inner side of the ham, the hardness increasing in proportion of the tightness of the tendon upon it. In this situation the bursa sometimes attains a large size. It is inconvenient, but is not attended with the evils accompanying the bursa of the patella, although I believe all bursæ and ganglions about joints are a source of weakness. I have punctured, pressed, and injected this bursa with more or less benefit. One rather remarkable case occurred in the person of a young woman, who was aged about 30, and was exceedingly fat. In her person the bursa in question had reached a considerable magnitude, but it did not appear so large as it afterwards proved, in consequence of the unusual dimensions of her limb. I punctured it with a trocar, and drew off eighteen ounces of aqueous fluid. It filled again, and was re-punctured many times, with this advantage, that it diminished gradually in size till it contained about six ounces only. I then injected it with a weak solution of sulphate of zinc, which further controlled the secretion till the disease ceased to be a source of annoyance to her. I do not think the sac was even then entirely obliterated, and I presume that ere long she will again require the assistance of a surgeon.

Connected with the subject of bursæ is that of ganglions, or adventitious cutaneous cysts, which form on the tendons about the wrist or foot.

A puncture with the point of a small lancet is a less painful and more certain remedy than a blow. The puncture may be sufficiently large only to allow the contents to be pressed through. A pad of lint, bound down with adhesive plaster firmly applied, will almost invariably destroy the cavity in twenty-four hours. A case occurred in the early part of the summer which may serve to remind us that even these cutaneous cysts will not bear rough treatment.

The cyst, which was rather unusually large, occupied the back of the wrist in a boy of eighteen. I punctured it several times, but it returned. I then passed through it a very fine thread. I was unfortunately absent from the hospital on the day of his next visit, and the thread remained for a few days beyond the usual period. Inflammation followed of a severe kind, and the boy became an inmate of the hospital for some weeks, where, having recovered from the attack of inflammation, he returned to the out-patient room with his original malady.

SUPPLEMENT TO A PAPER

"ON THE NERVOUS GANGLIA OF THE UTERUS."*

By Robert Lee, M.D. F.R.S.

Fellow of the Royal College of Physicians, London.

In the First Part of the Philosophical Transactions for 1841, I have described and represented in two engravings the nervous ganglia situated on the sides of the neck of the uterus, in which the great sympathetic and third sacral nerves unite, and from which branches proceed to the vagina, bladder, rectum, and the whole of the lower part of the uterus. In an Appendix to that paper, published in the Second Part of the Phil. Trans. for 1842, there is contained a further account of the nervous structures situated on the fundus and body of the uterus, and an engraving, in which the appearances they present at the full period of gestation, have been accurately delineated. From the form, colour, vascularity, and general distribution of these structures, and from their branches actually coalescing and being continuous with those of the great sympathetic and spinal nerves, I inferred that they were true nervous ganglionic plexuses, and formed the nervous system of the uterus enlarged by pregnancy.

In a gravid uterus at the full period, I have recently, and with still more care, traced the great sympathetic and spinal nerves into the two hypogastric ganglia, and from thence over both sides of the uterus to the fundus. A lens which magnified six diameters was employed in this dissection, which enabled me with unerring certainty to distinguish and to separate the nervous filaments from the fine cellular membrane by which they are so clearly surrounded, and from all the other contiguous structures. In this minute dissection, many of the details of the nervous system of the uterus are more perfectly shown than in any previous dissection made by me; and they confirm in the most complete manner the accuracy of all that is contained in my previous communications on this subject to the Royal Society. To this preparation I can now appeal as affording a perfect demonstration of the truth of all my statements respecting the ganglia and other nervous structures of the uterus.

DROPSY AFTER SCARLET FEVER.

A case of this kind is mentioned by Meckel, in which the patient, a lad of four years of age, towards the decline of the scarlet fever, became dropsical, and died with well-marked symptoms of pneumonia, having, during the last four days of his life, scarcely voided a drop of urine. On examination of the body, no other change in the kidneys was observed beyond a considerable thickening of the tunica propria of the urinary tubules, which was as much as 0·0025 of a line in thickness, and very brittle (spröde). This condition of the tunica propria allowed of the individual tubules being displayed without difficulty. The epithelial cells lining the tubules, as well as the rest of the renal substance, and the blood-vessels, were healthy. In explanation of the suppression of urine and the consequent dropsy in this and in other similar cases, Meckel considers that the tubuli uriniferi, owing to the thickened state of their tunica propria, were not in a fit condition to allow of the passage of the urinary fluid into them.—*Müller's Archiv.* Heft. i. 1846.

---

* Philos. Trans. Part 2, 1846.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

[Continued from p. 288.]

CONGENITAL NARROWING OF THE PULMONARY ORIFICE.[*]

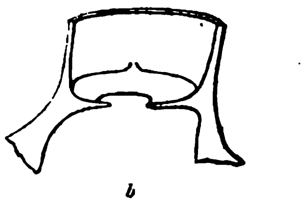
The great frequency of disease of the pulmonary orifice occurring during intra-uterine life, compared with similar lesion of the aortic ostium, cannot fail to be observed.[†] The aorta, it is true, is liable to several lesions of congenital origin, among which the fusion of its valves into a funnel-shaped channel is one of the most striking; but, during intra-uterine life, the functions of the aorta are light compared with those performed by the pulmonary artery, upon which mainly devolves the office of transmitting blood to the lower part of the body, and it is not surprising that, during the earlier months of fœtal existence, obstruction to the circulation, depending, it may be, either upon malposition of the body of the infant, pressure upon the umbilical cord, &c., or upon faulty conditions of the lungs, should determine the occurrence of imperfection or irreparable lesion in the delicate tissues about the pulmonary orifice, while the aorta, being less influenced by these or any other causes of obstruction, escapes uninjured.

Whenever, in more advanced life, the pulmonary artery is called upon to perform an unusual [‡] or too active function, it is found to be as liable to various forms of structural disease as is the aorta.

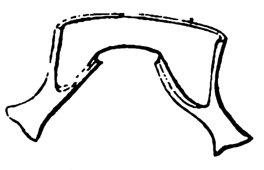
Congenital narrowing of the pulmonary ostium has been noticed by a large number of observers; and several writers have, to a certain extent, discussed the pathological relations of this lesion. Among others, Sandiforth, Hein, Louis, Dr. Craigie, and Dr. Stillé, have made it the subject of especial notice. The lesion is not by any means one of very common occurrence, as is proved by the fact that more than two instances of the kind have rarely been noticed by the same observer; relatively, however, it cannot be regarded as by any means rare, for it presents itself more frequently than does any other of the graver kinds of malformation to which the heart is liable. I have met with notices of about 60 well-marked instances of the kind, and might, doubtless, have obtained histories of many others, had it appeared necessary to extend my search still further.

Congenital arctation of the pulmonary orifice may occur in an almost infinite variety of forms. Occasionally there is found a very narrow passage, either confined merely to the ostium of the vessel, or involving also a portion of its ascending canal. This strait is generally rendered uneven by warty or ossific elevations. In other cases the orifice is less narrow than in the preceding instances, its sides being furnished with indistinct traces of rudimentary valves. Cruveilhier, Craigie, and many other observers, have described cases where the pulmonary orifice was furnished with an imperfect valvular apparatus, in the form of a transverse or conical partition, having an aperture in its centre, and presenting a smooth surface below; but above, three slightly elevated ridges which are apparently rudiments of the free edges of sygmoid valves (diagrams *a* and *b*). This is the state of parts most frequently noticed in cases of congenital narrowing of the pulmonary orifice. A very similar appearance is occasionally seen in the aorta. In some

a



b



---

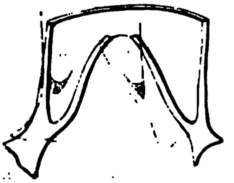
[*] In quoting a very extended series of cases, a large number of which correspond in many particulars with each other, I have, of course, been compelled to abridge many of the narratives, merely retaining, in each, those details which best illustrate the nature and effects of the lesions observed in the pulmonary artery and remainder of the circulatory system, and omitting many facts which certainly add much to the pathological value of most of the cases as they appear in the original works. The utmost that I have been able to effect, consistently with due brevity, has been to retain the most prominent and essential features of each case in such a manner that the perusal of the whole may furnish the reader with a complete view of all the symptoms which attend cyanosis, and of all the effects which have been noticed to result in the system from congenital malformation of the pulmonary artery. For the entire details of each case I must refer my readers to the original narratives.

[†] In nineteen cases of congenital malformation of the heart, described by M. Louis, there was contraction of the pulmonary artery in ten; but of the aorta, only in one.

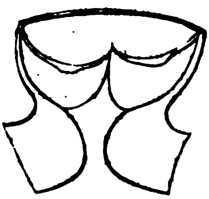
[‡] As in cases where the main arteries communicate freely by the ductus arteriosus.

instances the mouth of the artery is occupied by a thimble-shaped membrane, perforated at its apex, and smooth on both surfaces (Fig. c). Several cases have occurred in which the obstruction has been due to excrescences adhering to the valves. An instance is noted by Kreysig,* where the pulmonary artery was narrowed only on one side. In an example by Nasse, quoted by M. Hasse, the pulmonary orifice was blocked up by fleshy columns hardly separable from each other. A similar condition is described by Dr. Elliotson, as occurring in a case where the walls of the ventricle appeared to have grown up around the mouth of the pulmonary artery, forming a short narrow canal, leading to the orifice of the vessel, which was of the usual size (an appearance which may be represented by the diagram *d*).

c

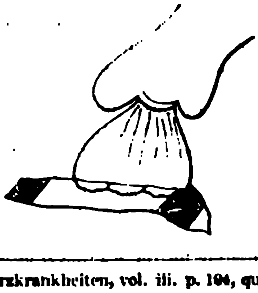


d



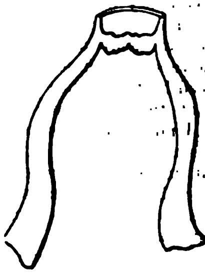
In a case related by Mr. J. Marshall, the valves were found in a contracted and inefficient state, and the vessel above presented a singular contraction. The diagram (*e*) is copied from Mr. Marshall's paper. In some instances, the vessel has been found considerably, but not extremely, narrowed, and either destitute of valves or furnished with only two sygmoid curtains.

e



In cases where the opening is extremely narrow, and life is prolonged for several years, the constricted part usually has a tendency to be forced upwards by the impulse of the ventricle. We have seen that in some of these instances, where the orifice is closed by a perforated membrane, this becomes extended into a funnel-shaped tube; in others the structures at the base of the vessel become rather elongated, and then the rudimentary valvular ring, which is the seat of obstruction, has an appearance of being situated unusually high up in the canal. In other cases a portion of the muscular tissue of the ventricle immediately at the root of the artery becomes stretched upwards, and may form a little supplementary muscular cavity below the pulmonary orifice, as figured in diagram *f*.

f



Lastly, the artery may simply be diminutive in size, but complete in all its parts. It is probable, however, that, in the cases of this kind which have been observed, the tissues of the arterial orifice have been rendered contracted and unyielding by previous disease; as it is clear that, providing the whole structures were healthy, the size of the artery would not fail to be proportioned to that of the ventricle.*

---

* Herzkrankheiten, vol. iii. p. 104, quoted by Otto.

* It may be supposed that the small size of the pulmonary artery is here the result of the diminished quantity of blood which passes through it to the lungs in consequence of the open state of the ventricular septum; but this view would generally be erroneous—as, in those numerous cases where, the pulmonary artery being contracted, the aorta is given off either from the right ventricle, or midway between the two cavities, there is not the slightest reason to believe that blood ever passes completely through the septum from right to left, however freely it may do so in a contrary direction; in these cases also the ovalian foramen is not unfrequently closed. In hearts which I have seen, where a free opening—apparently the result of ulceration—had long existed between the ventricles, the pulmonary artery was not diminished in size. In a few instances, however, (as for example in that which will presently be quoted from M. Schuler, where contraction of the pulmonary orifice was attended with an open state of the foramen ovale and arterial duct, the ventricular septum being complete), the narrowness of the vessel may be, in part, owing to the diversion of the stream into another course.

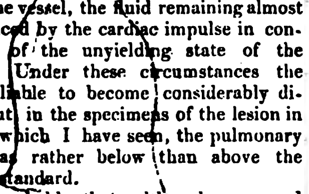
Several other forms of contraction of the pulmonary orifice have been observed. These will be noticed in the details of the several cases.

The whole of these morbid conditions are evidently due to lesions of the vessel occurring at a very early period of intra-uterine life; the obstruction thus produced checking the further development of the parts, and frequently preventing also the due formation of the ventricular and auricular septa, and other portions of the cardiac apparatus, which are at that period either wholly undeveloped, or but imperfectly formed.

It has been remarked by several authorities, that, where the pulmonary valves are concreted, rendering the orifice of the vessel extremely narrow, the artery above is not contracted, but is occasionally rather dilated. I have frequently observed a similar condition of parts in the aorta. It is evidently attributable to delay of the blood in that part of the vessel, the fluid remaining almost uninfluenced by the cardiac impulse in consequence of the unyielding state of the ostium. Under these circumstances the aorta is liable to become considerably dilated; but in the specimens of the lesion in question which I have seen, the pulmonary artery was rather below than above the ordinary standard.

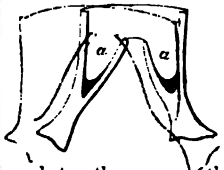
It is probable that, although a normal valvular apparatus is absent in these cases, regurgitation of blood into the ventricle occurs in but a very small proportion of instances. The arterial aspects of the contracted orifices are occasionally clothed with small distinct masses of organised vegetations, which freely admit of the passage of blood into the artery, but afterwards close together and prevent reflux. A very curious arrangement of this kind is observable in a heart preserved in the Museum of Guy's Hospital, (fig. g.). The details of this case

g

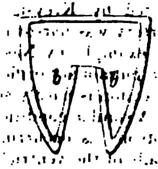


will be mentioned hereafter. In most of the examples where the rudiments of the sygmoid curtains form an elevated cone projecting upwards into the vessel, this apparatus in reality constitutes a very efficient valve. In many of these cases the mechanism of the parts is very similar to that of the small glass ink bottles which are contrived in such a manner as to be carried open in the pocket without escape of the fluid.

The only difference is that the sides of the funnel-shaped valve of the artery (*a*, *a*), require to be pliable, and capable of



being pressed together; were they wholly inelastic, like those of the conical glass tube, (*b*, *b*), they would admit of some degree of



reflux at every ventricular diastole. It, however, rarely, if ever, happens in the pulmonary artery that the malformed valve altogether loses its pliability. In a few cases, where the communication with the ventricle is direct, or where the orifice of the artery is formed by a large circular opening in a transverse membrane, regurgitation may occur; but these are, I believe, exceptional and rare instances.

It is remarkable how extreme a degree of narrowing of the pulmonary orifice may exist without producing fatal interruption to the circulation. I have never seen or heard of any instance where the area of the aortic opening had become reduced to less than the diameter of a common writing-quill, but a considerably greater degree of arctation of the pulmonary orifice has been noticed even in persons above the age of ten years, and this too in cases where it was not observed that any supernumerary arteries communicated with the lungs. There frequently, however, remains a doubt, in such cases, whether the lungs may not have received an indirect supply of blood from other sources, which passed undetected;—and it must be observed that, here, patency either of the auricular or ventricular septa, or of both, is usually present; a means of relief to the right ventricle which is not afforded to the left in cases of aortic obstruction. It will also be remembered that, in the former instances, the entrance of blood to the obstructed vessel is greatly aided by the action of the lungs,—the respiration, in many of these cases, being increased in rapidity evidently for the purpose of, in some measure, compensating for the scantiness of the supply of blood to the lungs by the quickness of its transit,—a point which has been very ably argued by my friend Dr. Lloyd. It will be observed that, in cases of this description, the duration of life depends far more upon the strength of the right ventricle, and the expansibility of the lungs, than even upon the size of the vessels by which the pulmonary circulation is carried on—a fact of no small practical moment.

In classifying the cases where the pulmonary orifice has been found congenitally narrowed, reference should especially be had to the relative position which this vessel, the aorta, and the ventricles, are found to occupy in the several instances; as the variations which occur in this respect are extremely marked, rendering the degree of malformation very far indeed more salient in some cases than in others; and especially as it is found that such variations produce considerable difference in the state of the circulation, and distinctly affect the viablity of the individuals who suffer from these malformations.

Still it appears preferable to arrange the cases according to the degree of abnormal communication which is observed to exist in the several instances, premising that the modes in which the large vessels are found to be given off from the heart, in cases of arctation of the pulmonary orifice, are as follow:—

1. The aorta arising from the right ventricle, the narrowed orifice of the pulmonary artery being situated to its left, and anteriorly. The septum of the ventricles pierced by a rounded opening, which may either be confined to the upper portion of the partition, or be so extremely wide as to leave the ventricles separated merely by a slightly elevated falx.

2. The aorta, originating behind the pulmonary artery, nearly midway between the ventricles, and above the ventricular septum, which terminates by a crescentic margin below the ostium of the vessel; thus leaving an aperture of greater or less size through which both ventricles communicate alike with the arteries and with each other.

3. The narrowed pulmonary artery and the aorta arising, as usual, from the right and left ventricles, with or without a rounded aperture in the ventricular septum.

Although by far the larger proportion of instances in which these malformations occur are congenital, it occasionally becomes a matter of difficulty to decide whether many, if not the whole, of the abnormal appearances are not the results of comparatively recent disease. In the cases of the first and second orders, just described, such a doubt cannot for an instant be maintained; a single glance will shew that the principal lesions are congenital, although morbid changes of later date may have been superadded; but with regard to the third class, it is often by no means easy to decide;—in such cases an opinion can only be founded upon a minute examination of the structures, and a knowledge of the duration and character of the symptoms during life.

The following arrangements of parts have been observed in cases where the orifice of the pulmonary artery was congenitally narrowed. (1.) The pulmonary circulation supplied by enlarged bronchial arteries. (2.) The auricular and ventricular septa imperfect; the ductus arteriosus remaining permanently open. (3.) The foramen ovale and arterial duct permanently open; the ventricular septum being complete. (4.) The arterial duct and ventricular septum pervious; the foramen ovale perfectly obliterated. (5.) The arterial duct closed, the ventricular and auricular septa perforated. (6.) The ventricular septum, only, incomplete. (7.) Patency of the foramen ovale only. (8.) Entire absence of any unnatural communication either between the cavities of the heart or its great vessels. A collection of examples of each of these kinds of malformation will furnish some interesting data illustrative of the pathology of the circulation.

(1.) *The pulmonary orifice contracted—the lungs supplied by enlarged bronchial arteries.*

Reference has been already made to a class of cases where—the ostium of the pulmonary artery being congenitally occluded,—the supply of blood to the lungs is in part or wholly furnished by dilated bronchial arteries, arising from the descending thoracic aorta. The following case proves that a similar arrangement may obtain where the entrance of the pulmonary artery is merely extremely narrowed. It is, however, the only well-marked instance of the kind with which I am acquainted.

M. Jacobson describes* the heart of a boy who died with morbus cæruleus, and in whom the aorta, which was considerably enlarged, was given off from the right ventricle. The *pulmonary artery* was not more than one-fourth the size of the aorta, its ostium being greatly contracted by thickening of its valves. But, to compensate for this, the *bronchial arteries* were very much enlarged; three of these vessels passed off from the right and left sides of the aorta to the lungs, and a branch was distributed to either lung from the pericardial artery. · A large opening existed in the *septum of the ventricles*; the *foramen ovale* was almost closed.

II.—*With patency of the auricular and ventricular septa and ductus arteriosus.*

We have observed that, in by far the

---

* Meckel, Archiv. für Physiologie, B. ii. St. i. 13.

larger proportion of instances of non-development or congenital occlusion, of the pulmonary orifice, the arterial duct remains permanently open throughout the life of the individual; still, such an arrangement does not invariably obtain, even in those extreme instances; and, in cases where children are born with great narrowing of the pulmonary ostium, it may be stated, as a general rule, that the obstruction to the circulation thus produced (however extreme it may be) is usually not sufficiently great to determine the permanency of the arterial duct. This is probably due to the fact that, to whatever extent the arctation of the pulmonary artery may have gone, the entrance of blood through its narrowed orifice is rendered considerably more free immediately the child is born, and respiration commences. Arctation of the pulmonary orifice is doubtless a source of far greater obstruction to the passage of blood from the right ventricle during intra-uterine life, while the respiratory organs are inactive, than it is subsequently to birth; hence we may probably account for the fact that a degree of obstruction in the pulmonary artery which has been sufficient to determine the persistence of an opening in the ventricular septum, has, in many cases, not been capable of preventing the foramen ovale and the arterial duct from becoming naturally closed. There are, however, several instances on record in which permanence of the arterial duct was attendant upon the form of lesion now under consideration: still, they are few compared with those in which the duct has become obliterated; not amounting, in fact, to more than one case in ten. And it will be observed that in the whole of the following instances, although the canal was pervious, its channel had become, to a certain degree, contracted. And it is probable that in cases of this kind it never retains that width relatively to the pulmonary artery which is observed in the naturally-constructed fœtal heart. This last observation also applies to the cases where permanence of the arterial duct is combined with an obliterated state of the pulmonary orifice. I believe that, neither in these nor in any other class of instances where life has been much prolonged, has the arterial duct been found to exceed, if ever it has been seen to equal, one of the main pulmonary branches of a well-formed individual of the same age.

A remarkable instance of this kind of malformation is recorded by Dr. Cheever[*]. The patient was a boy, who died at the age of 13½ years. During the first months of infancy his skin began to assume a purple tinge, and his respiration became, at times, laborious. As he grew up, his chest presented an appearance of deformity. Dyspnœa, attended with slight cough and occasional expectoration of blood, continued to increase until Dr. C. saw him: he was then 12 years of age. He was tall and slender, having little flesh on his extremities. The last joints of his fingers and toes were unusually long, broad, and bulbous; the nails hooked, and of a dark purple colour. The surface of the body generally was of a leaden hue; but, on the accession of a paroxysm, some parts, such as the lips, nose, and ears, acquired a very dark purple tint. He was very sensible to cold, and the temperature of his body, when at rest, was below the natural standard, though easily raised by the slightest exertion. There were no marks of a diminished energy of the brain; his intellectual powers were good. Attempts at active exercise produced very severe paroxysms of palpitation and dyspnœa, blackness of the tongue and fauces, and all the most vascular parts of the surface; a turgidity of the vessels of the neck, an engorgement of the countenance, and great heat of the surface[*]. These symptoms also often occurred unexpectedly when he was not using exercise. The paroxysms above described continued to increase in force and frequency, and were latterly complicated with symptoms of hydrocephalus. His cough became incessant, attended with frequent expectoration of black blood, and great difficulty in breathing. His eyes, before prominent and suffused, now seemed starting from his head; he was paralytic on one side, extremities œdematous, bowels torpid. During his last illness the heat of his body was very variable, often great. His pulse was quick and small, but regular. Deglutition was often suspended, and he had frequent hæmorrhages from the mouth and nose. He died reduced to the last degree of emaciation. Upon examination, the thymus gland was found large and distinct, the lungs very small and dark coloured, and adherent to the ribs on either side, and very firmly to the diaphragm. Tubercles were pretty generally diffused throughout their substance. The cavities of the thorax and pericardium appeared black and gangrenous[†], but free from serous effusion. The heart, generally, appears to have been smaller than is usual in persons of that age; its apex was obtuse, and there was a collection of fat upon its surface, which was remarkable, considering the emaciation of the subject. The auricles were distended with blood. The parietes of the right ventricle were so much increased in hardness and muscularity as to render it incapable of containing more than half an ounce of blood. The *pulmonary artery* was nearly impervious; its valves were thickened into a triangular form, and so much constricted as to admit with difficulty the eye of a small probe. The *ductus arteriosus*, about half an inch in length, was pervious, and of the size of a crow-quill. The sides of the left ventricle were thin, and its cavity proportionally increased. There was a perforation in the *septum of the ventricles*, just below the origin of the aorta, large enough to admit the little finger. Through this communication ligamentous bands, resembling the chordæ tendineæ, passed to either ventricle, proving that the perforation was the effect of malformation, not of disease. The *septum* of the *auricles* was entirely wanting.

---

[*] New England Journal of Medicine and Surgery, vol. v. p. 218, 1821.

[*] In some other cases of cyanosis the body has been noticed to be liable to intense flushes of heat.

[†] This was probably an excessive degree of the ecchymosed appearance of the thoracic serous membranes which has been observed in some other instances of cyanosis.

M. Obet[*], describes the case of a boy who became affected with cyanosis in his second month, and died at the end of his 3d year. The lungs were found to be sound, the right auricle was greatly larger than the left; the rest of the heart was of usual size. The *foramen ovale* was open; the *pulmonary artery* very small; its tunics were thin, like those of a vein, and its orifice so contracted that it would scarce admit a probe; it arose a little in front of the septum of the ventricles. The *canalis arteriosus*, which was very narrow at its origin, opened into the left subclavian. The *septum of the ventricles* was deficient towards the base of the heart. The aorta—larger than natural—arose above the septum in such a manner that one of its sigmoid valves corresponded with the right ventricle. The aorta gave off its primary branches in an irregular manner, and passed to the right of the trachea, the pulmonary artery passing to the left.

III.—*The ductus arteriosus and foramen ovale patent; the ventricular septum complete.*

In the following cases the narrowing of the pulmonary orifice must have occurred much later than in the instances just quoted.

M. Bapt. Schuler[†] mentions a male infant whose nails and lips became blue a few days after birth, and who lived only 7 weeks. Upon examination, the lungs were found of a blackish purple colour. The right auricle was distended with blood, and its walls were thicker than natural. The venæ cavæ and coronary veins were also distended. The *foramen ovale* was widely open, and its valve reticular. The walls of the ventricles were very fleshy, especially those of the right, the cavity of which would scarcely admit a small nut. The valves of the *pulmonary artery* coalesced and projected upwards, leaving but a very contracted opening. The orifice of the aorta was much wider than natural, and its valves thickened. The *arterial duct* was narrow. Many of the mesenteric glands were in a state of scrofulous degeneration.

The above case nearly resembles those already detailed in which closure of the pulmonary orifice was followed by extreme contraction, nearly aproaching to obliteration, of the cavity of the right ventricle; the larger proportion of the blood, finding no early exit from that receptacle, passed freely through the wide foramen ovale into the left cavities, whilst the pulmonary ventricle became extremely small. If, however, this contracted state of the ventricle was not rather apparent than real, it is probable that the lungs received a supply of blood from accessory vessels which escaped M. Schuler's observation, as the pulmonary circulation could scarcely have been adequately maintained through the narrow ventricle and slender arterial duct.

M. Seiler[*] observed the case of a man, æt. 29, in whom the chest was found to be deformed, its cavity being much narrowed. The lungs were small, collapsed, of a livid colour, almost approaching to black, and pressed into the posterior part of the cavity by the enlarged heart. This organ was three times larger than natural; its walls were much thickened, those of the left ventricle were thicker than the thumb, and presented traces of ossification. The cavities were full of blood. The *foramen ovale* and *arterial duct* were pervious, the former very freely. The *pulmonary artery* was very narrow, its valves ossified. The aorta was very large; its tunics were not thinned.

IV.—*The foramen ovale obliterated, the ventricular septum and arterial duct pervious.*

An instance of this description is related by Dr. Houston[†]. The subject of his case was a boy, æt. 3 years, who died of phthisis and bronchitis. There was violent action of the heart, but the pulse was feeble and the skin cold. The face, hands, and feet, were of a dark livid hue; this colour had not been habitual, and "had only come on when he laboured under pectoral affections." It could not be ascertained whether violent exercise produced the same effect. The right auricle was found to be large, the *foramen ovale* closed. The *pulmonary artery* was about half the usual size, and furnished with two semilunar valves. A smooth defined hole, large enough to admit the little finger, and twice as large as the pulmonary orifice, led through the *septum*, from the right ventricle into the upper part of the left ventricle. The left auricle was small. The left ventricle of the same size and thickness as the right. The aorta was unusually capacious; its valves were perfect. The *ductus arteriosus* was diminished in size, but not obliterated.

---

[*] Bulletin des Scien. Med. réd par Grapenon, t. ii. p. 65, 1808.

[†] Diss. de Morb. Cærul. Œniponte, 1810, quoted by Hein.

[*] Horn. Nues. Archiv. Bd. ii. Heft. ii., 1805, quoted also by Corvisart as from "a thesis read at Wittenberg."

[†] Dublin Hospital Reports, vol. v. p. 322.

These are the only examples with which I am acquainted where permanence of the ductus arteriosus has been observed coincidentally with narrowing of the pulmonary orifice. In the whole of the instances of this lesion which I shall next have to cite the duct was found impervious.

[To be continued.]

CHEMICAL COMPOSITION OF MILK.

BY M. DUMAS.

From some experiments on the chemical composition of milk, M. Dumas finds that the milk of herbivorous animals always contains the four kinds of matter which form the chief part of the food of these animals, namely, albuminous matter, represented by casein; fatty matters, represented by butter; saccharine matters, represented by sugar of milk; and lastly, salts of different kinds. In the milk of carnivorous animals, on the other hand, one of these principles, namely, the sugar of milk, is completely absent, unless bread, or other substances containing amylaceous matter, have formed part of their food: the other three ingredients, the albuminous, fatty, and saline principles, which form the chief constituents of their food, are found in abundance. As a proof that the existence of sugar in the milk of carnivorous animals is dependent on their having partaken of starchy principles in their food, it is sufficient to confine them entirely to animal food, when no trace of saccharine matter will be detected in their milk: then to mix bread, or other amylaceous matter, with their food, upon which the presence of sugar will become quite perceptible. Although the above evidence is strong, yet M. Dumas thinks more is wanting before it can be concluded that the formation of sugar of milk is absolutely impossible unless starchy matters have constituted part of the food. He found, moreover, that by varying the proportions of the different elements of food he varied also the relative proportions in which these elements appeared in the milk.—*Gazette Médicale*, Oct. 1845.

MEDICAL GAZETTE.

FRIDAY, AUG. 28, 1846.

It is impossible to peruse the correspondence which has been lately presented to Parliament respecting the Quarantine laws, without coming to the conclusion that the government of Austria, which has hitherto shown so great a disposition to join with England in reducing the restrictions on commerce within reasonable limits, is the main cause of the great question not being settled upon a uniform and satisfactorily basis. How is this inconsistency to be explained? It lies too deeply for us, and appears to be owing to some inexplicable connection in their political relations, between Austria and the Italian states. We have elsewhere[*] had occasion to commend the judicious plan pursued at Trieste of including in the quarantine period for vessels with clean bills, the time occupied in sailing from port to port. In this respect the Austrian port of Trieste contrasts most favourably with the ports of Genoa, Leghorn, Naples, and Ancona, where, under the pretence of excluding plague, the most tyrannous restrictions are enforced, and enormous fees are exacted.

The efforts of the most eminent statesmen of France and England have been for some years directed to the plan of holding a congress of delegates from the various European states possessed of ports in the Mediterranean, for the purpose of deliberating and agreeing upon a uniform system of quarantine regulations, which should be binding upon each and all of them with reference to each other. We learn from the correspondence lately presented to Parliament, that the first proposition of this kind was made by the French Government in 1838; but it appears to have been attended with no results. In June 1843, Lord Aberdeen reopened the question, proposing that Genoa, as a port of a neutral character and central position, should be selected in preference as the seat of the meeting. The French government, however, considered Paris to be the most convenient place, while the Austrian government thought Vienna to be best adapted for the sanitary congress! The Austrian minister suggested that the discussions should be entirely confined to the plague, and should not include any facts or theories connected with yellow fever or cholera. He also proposed that before the meeting took place the opinions of physicians of different countries, as well as of superintendents of quarantine, should be taken on the following questions:—

---

[*] Page 201.

1. The minimum and maximum periods of quarantine for passengers.

2. The period of quarantine necessary for goods and merchandise.

3. The plan best adapted for disinfecting objects imbued with contagion.

The English and French governments acted *bonâ fide* in this matter; and immediately appointed competent men to make all the necessary inquiries respecting plague and quarantine in the ports of the Mediterranean. In the autumn of 1844, Sir W. Pym received an order from our government to visit and inspect the different Mediterranean ports; and in our former article on this subject, we have already quoted from his report certain facts observed by him in illustration of the inconsistency and absurdity of the quarantine regulations at present in force. The French government has more recently referred the question to the Royal Academy of Medicine, and a very full report, embracing all the difficulties of the subject, has lately appeared.

In the meantime, with the ex of returning a civil reply, acknc ing the expediency of appoin sanitary congress, the governn Austria has done nothing. two years have elapsed, and taken no step either to resol inquiries which it had deemed sary, or to forward the views of and England in joining in the pr congress. The Austrian minis been put in possession of the ir tion,—that the governments of and England are already provid the materials for the settlement questions proposed by him; reply has been returned to t note of this part of the correspo which is dated April 20, 1846.

It would indeed be a matter f regret if the question, now so vanced, should, through the indi of one European power, be allc drop. The misfortune is, that the intervention of Austria, it likely that any amelioration made in the quarantine laws minor Italian states; and it is ports of these states, that th obnoxious part of the system carried out. Any indirect regu adopted by France and Engla have no effect except by the example; and when the alte are opposed to the interest of who benefit by the continuance establishments, it is not likely t example will be readily followe W. Pym states in his official on information furnished to him British Consul at Naples abou years ago, that in consequence presentations made against the q tine system at Naples, the peri reduced from fourteen days t upon vessels having passed the of Gibraltar; and that in a fe after, the people who had be ployed in the Health depa petitioned the King, stating that, in consequence of the reduction of quarantine, they were out of employment, and starving: and they prayed his Majesty to have quarantine again established. Their request was immediately granted! This fact alone shows that it is not the fear of the plague, but the desire to support the sanitary boards by the exaction of quarantine dues, which is the cause of the maintenance of the system! The mischief is, that the Sicilian officials are not content to receive the dues only, but they pursue all kinds of practices vexatious to commerce in order to show that they really work for their salaries. Thus we learn that at Palermo, bars of iron have been actually run through the fire in order to destroy contagion, and sugar-hogsheads have been washed with lime! In a very recent case, an English vessel was placed under quarantine, and subjected to a charge of about three per cent. on the value of the cargo, because a report had appeared in the papers of a fever having prevailed in Glasgow! If Austrian commerce suffered to an extent like that of France and England, by these tyrannous exactions upon the most absurd pretences, it is by no means improbable that we should have a very speedy settlement of the question.

There are various aspects under which the laws of quarantine regarding the plague, may be viewed. Some hold the disease not to be contagious, and deny the necessity for any restrictions on commercial intercourse; — others admit the existence of contagion in a modified form, but hold that a much shorter period for seclusion than that now enforced, is sufficient to prevent all risk of importation. This we believe to be the opinion of the majority, and should a sanitary congress be held, the discussions will most probably turn upon the questions arising out of this view of the subject. The contagiousness of the plague is now so generally admitted, that any attempt to overturn the quarantine system by advocating the contrary view, is likely to prove fruitless. There is one fact mentioned in the correspondence which strikingly shews the utility of a judicious system of quarantine in keeping out this disease.

Constantinople has been free from plague ever since the year 1837, when quarantine was first established in that part of the world. At first there was a strong lazaret establishment on the Asiatic side of the Bosphorus: this, however, after the cessation of plague for three or four years, was again converted to its former use—a cavalry barrack; and the lazaret establishment removed to the Dardanelles, where all vessels passing to Constantinople are examined, and those liable to quarantine are detained. The Supreme Council of Health at Constantinople, composed of individuals of different nations, deserve the greatest credit for their very excellent quarantine arrangements, not only against ships, but against the interior of the country, which have hitherto been most successful. It is thus proved that the plague is not indigenous in that country, whatever it may be in Egypt.

One fact like this is likely to have considerable weight with the Congress; and assuming that the necessity for maintaining quarantine laws will be generally admitted, the great question arises, what is the period of incubation of the plague; for on this must depend the period of quarantine for individuals. The time of incubation is variable, and is probably influenced by the state of the epidemic to which the person has been exposed. Eighteen medical men practising in the Levant, and well acquainted with the disease, although they differed on the subject of contagion, agreed, with one exception, that the period of incubation was not greater than from three to ten days after exposure. Doctor Floquin, of Smyrna, put down fifteen days as the maximum. The present opinion of the most experienced observers, is that *eight days* after exposure to infection, may be taken as a fair limit. In the French report, it is stated that the disease was never observed to break out among persons at a distance from countries where it was endemic and out of the focuses of infection, after they had been isolated for *eight days*; and the correspondence before us furnishes us with a remarkable fact in illustration of the correctness of this conclusion.

In three years—from 1840 to 1843—there were admitted into the Lazzaretto of Alexandria, no less than 5240 persons, and of these only 43 were attacked with plague. It is stated that each of these individuals was attacked before the seventh day; and in consequence of this, the period of quarantine required to be performed subsequently, was reduced. On the other hand, Sir W. Pym was informed that in the lazaret of Genoa, two instances had occurred of the crews of vessels having been attacked with plague *eighteen* and *nineteen* days after the date of sailing from an infected place; but he considers that these cases demand further inquiry, and we have it on the authority of the French commission, that all cases of apparent incubation for a longer period than eight days, admit of a different interpretation.

Our space will not allow us at present to enter into the question regarding the period of quarantine necessary for goods and merchandize, or the best means of disinfecting them. The nature of the goods, and the circumstances under which they have been packed, are material points in the settlement of this question. For this purpose, the evidence of well-informed men practically acquainted with lazaret establishments should be taken, and one uniform system laid down. It is, however, a fact worthy of notice, that, during his quarantine mission, Sir W. Pym could not ascertain that any one case of plague had been produced in any one of the various lazarets that he visited, in consequence of the manipulation of merchandize. After this, it will scarcely be contended that it is necessary to make bars of iron red hot, or to expose for three weeks to the air a valuable cargo of coffee, in order to drive away the pestilence!

The force of public opinion must surely before long lead to the renewal of negotiations for a sanitary congress, to the members of which should be delegated the power of binding European nations under one common law. A law of this kind, while it would secure a country from the importation of disease, would protect its commerce from unjust aggression. We know of no case in which international interference is more urgently demanded on the score of justice and humanity; and the facts already accumulated on the medical part of the question, are now sufficiently numerous and trustworthy, to allow of its being brought to a speedy and satisfactory settlement.

PROGRESS OF THE ASIATIC CHOLERA.

It is reported in the public journals that the Asiatic cholera is still continuing its ravages along the coast of the Red Sea. From the latest intelligence, we learn that the deaths at Medina amounted to 300 per day, and at Gedda to 25. Four cases are stated to have manifested themselves at Suez: none of these, however, had proved fatal. The close intercourse which exists between Suez and this country by the monthly overland route to and from India, renders this intelligence of some importance.

Reviews.

cal Sketch of the late Robert
, M.D., F.R.S.E. Professor
icine and Botany in the Uni-
of Edinburgh, &c. &c. By
s RANSFORD, M.D. 8vo.
Edinburgh, 1846.

raphical sketch formed the
ddress delivered before the
Society of Edinburgh, in
It is, what a medical bio-
ould be,—a concise account of
d progress of the individual
it refers,—without flattery,
ut any attempt to raise his
and character as a profes-
by depreciating those who
contemporaries. Dr. Robert
as born on the 7th Decem-
and died on the 7th August,
was appointed to the Pro-
of Medicine and Botany in
rsity of Edinburgh in 1820;
are here informed, filled the
credit and honour up to the
f his life. He was exceed-
ular as a teacher, and his
ere numerously attended. In
ummer class consisted of 280

fessor appears to have been
ery active habits, and it was
yearly to make long bo-
cursions with his pupils. We
n one occasion calling upon
linburgh, when he was just
ting with a party for a bo-
cursion into Sutherlandshire
ness! In his last pedestrian
which he undertook in
met with an adventure, an
f which we are tempted to
a caution to travelling bo-

g Weymouth one morning in
companied by a young friend,
late in the evening at Ware-
rsetshire, with the intention of
ere. In this they were disap-
The people of Wareham did not
should be so,' writes the Doctor
spirit; 'and, with an expres-
quivocal scorn, we were refused
inns. We were pedestrians,
, weary, with botanical boxes on
and our neckcloths in our
l such guests, they shewed us
they did not desire. We had no wish to walk back to Weymouth or Dorchester. I —— was excessively angry at the intolerable insolence of these innkeepers; but it was so supremely absurd, that I could do nothing but laugh. The result was, that we set off, and, walking as quick as we could, reached Winfrith soon after ten o'clock, P.M., not having tasted one morsel of food for thirteen hours."

After this, we say to all botanists, *Cave Wareham.* From some little experience in pedestrian excursions, we do not believe that such inhospitality would have been met with in any country but England. English innkeepers always judge of travellers by their pretensions, and regulate the amount of civility which they show them by their equipage and luggage. It is thus that while they reject an honest unpretending professor of botany of a Royal University, they allow themselves to become the easy dupes of a showy swindler: and it is really satisfactory to find that retribution does sometimes in this way ultimately fall upon them.

The exhaustion produced by this over exertion was the foundation of an illness from which the Doctor never recovered. He died, as we have stated, in August 1845, in the fifty-ninth year of his age. The following may be taken as a fair summary of his character. Dr. Ransford says:—

"In closing the outline of our estimable friend's career, we would simply point to it as affording a bright example of untiring industry and conscientious discharge of duty. He was unexpectedly called to lecture upon Botany, whilst possessing a knowledge of the subject not exceeding that of the generality of graduates in Medicine, and without time to prepare a regular digest of the science from a systematic course of study; but, quick in perception, diligent in investigation, prompt and energetic in action, he laboured successfully to supply the deficiencies of his early botanical education, and never relaxed his efforts to keep pace with the rapidly advancing science. If he erred, it was in attempting too much. Were it necessary, I could bring forward the most gratifying proofs of attachment from former pupils, so many of whom entered the University strangers to him, but were, by his kind-heartedness and amicable familiarity, converted into warm personal friends. In them and in their concerns he took a lively and considerable interest; and when sickness visited them, they received from him not only the unwearied attention of a skilful

physician, but even the tender sympathy of an affectionate parent."

We have no doubt that the friends and pupils of Dr. Graham will feel pleased to possess this biographical sketch of their former companion and teacher.

Quelques considerations en reponse à l'examen de la Phrenologie de M. Le Professeur Flourens. Par M. S. de Wolkoff.

Observations in reply to M. Flourens, on his Examination of Phrenology. By M. S. de Wolkoff. 8vo. pp. 16. 1846.

Baron Flourens has lately said of Gall and his system, that the great founder of phrenology first began by inventing an hypothesis, and he then invented an anatomy to suit it! This, it appears, has induced M. de Wolkoff to come forward in defence of the science. There has been so long a repose from anything like controversy on this subject, that we should be sorry to be the means of reviving it, and therefore our remarks will be brief. The ground upon which Baron Flourens objects to phrenology, is the entire absence of proof of the brain being subdivided into the numerous organs imagined by Gall. Indeed, in his view, anatomy entirely fails to support the phrenological hypothesis. Flourens observed, that when a considerable portion of the cerebral hemispheres was removed, there was a *general* weakening of the intellect, but the propensities of the individual remain unchanged. M. Wolkoff explains this in the usual way, by alleging the necessity for a unity of function. To plain reasoners, however, it must always appear, in order to admit a close connection between organ and faculty, that the faculty or propensity corresponding to the part of the brain removed, should suffer in a greater degree than the others. As this is not the case, there appears no reason why different functions in the shape of faculties and propensities should be assigned to different parts of the cerebral mass. M. Wolkoff states that there is a constant correspondence between certain strongly or weakly developed mental faculties, and the great prominence or great depression of certain parts of the cranium. We had thought that this constant correspondence was not generally admitted, and that it was still a *quæstio vexata*. Although we do not think that the objections taken by Flourens are satisfactorily answered, we must do M. Wolkoff the justice to say, that he discusses the subject with fairness and candour. His reasoning will confirm those who are already adepts in the science, but we doubt whether it will make a single convert.

The Microscopic Anatomy of the Human Body in Health and Disease, illustrated with numerous drawings in colour. By Arthur Hill Hassall, M.R.C.S. &c. Part I. August. 8vo. pp. 38. London: Highley. 1846.

As this work is indicative of a praiseworthy attempt to render the study of microscopic anatomy familiar to the profession, and as the part before us is the first of a series to be published monthly, we feel bound to give it an early notice. Among those who are actively engaged in practice, a vague knowledge exists that many interesting discoveries have been recently made by microscopists. The results, and their important bearing in practice, are, however, but imperfectly known to the mass of the profession in this country; since the facts have been published only in isolated reports; and sometimes with such a minuteness of detail, as to render them unattractive to men who can spare but little time for the study of a new branch of science. In Germany, as our readers must be aware from the translations which frequently appear in our pages, there is a journal conducted by Dr. Heller, specially devoted to microscopical pathology. Mr. Hassall's work, although published in monthly parts, is intended to form, when completed, a condensed treatise of the discoveries hitherto made in microscopic anatomy, and will include both healthy and diseased structures.

The author divides his work into two parts:—the one treating of the Fluids, and the other of the Solids of the body. In the number just issued (for August), he commences with an examination of the fluids,—the Lymph, the Chyle, and the Blood: but the greater portion of it is devoted to the examination of the last mentioned fluid. While the microscopic characters of the fluids are most prominently treated, Mr. Hassall does not omit to notice briefly their chemical and physiological properties. He also makes free use of the researches of Müller, Gulliver, and others.

The account of the coagulation of the blood is exceedingly well drawn up, and is calculated to explain some difficulties which have presented themselves in the pathology and diagnosis of inflammation. In treating of the structure of the red globules, the author sides with the *anti-nucleus* party; and denies the existence of a nucleus in the blood-discs of man and the mammalia. Our readers are doubtless aware that there is a great division of opinion on this point among microscopists, and further observations are required to settle the question.

Mr. Hassall adopts Liebig's view, that in arterial blood the iron of the globules is in the state of peroxide, while in venous blood it is in the state of carbonate of the protoxide. Respiration, therefore, according to Liebig, consists in a surrender of oxygen by arterial blood during its circulation, and the conversion of the iron temporarily to the state of a protocarbonate. We have a great respect for Baron Liebig as a chemist,—but we would as soon take his opinion on a disputed question in navigation as in physiology. We do not feel called upon to show that this hypothesis is erroneous, for we are not yet aware that it rests upon a shadow of proof; while it involves the admission of some other assumptions,—such as the sufficiency of the quantity of iron for the purpose—the instantaneous decomposition of peroxide of iron at 98° by organic matter—the florid colour of arterial blood being due to peroxide, and the dark crimson red of venous blood to protocarbonate of iron, &c. &c. Mr. Hassall admits that the mere presence of iron is not in itself sufficient to account for the colour of the blood: we will go further, and say that Liebig's hypothesis entirely fails to account for the changes of colour in the two varieties of blood; and yet, so far as we know, the change of colour is the principal ground on which the hypothesis is based.

We trust Mr. Hassall will not make his publication the medium of circulating bad physiology, or adopt a physiological theory without the closest examination, because it emanates from one who is regarded as a great authority in *chemistry*. We conclude our notice, notwithstanding this criticism, by saying that we have derived great pleasure and satisfaction from the perusal of this, the first part of his work. His style is clear and concise, his descriptions are perfectly intelligible, and the plates are well executed. The work, so far as we can judge from this number, deserves the patronage of the profession.

Proceedings of Societies.

MANCHESTER
PATHOLOGICAL SOCIETY.

August 6th, 1846.

Disease of mitral aperture—Occasional absence of murmur.

Dr. Watts directed attention to the morbid appearances in the following case of heart-disease. The pericardial sac was obliterated by old adhesion. The heart was of the ordinary size, perfectly sound on the right side, but on the left diseased: the lining membrane of the left auricle was thick, opaque, and indurated; the mitral aperture so constricted that the point of the finger could not pass through; the mitral valve contracted and indurated, and its tendons were shortened, hard, and opaque. The lungs were somewhat emphysematous, congested with blood, and œdematous: the right was adherent to the chest; the left, except at a single point, was free from adhesions. No other organ was diseased.

The woman, aged 67 years, never had rheumatism, and was in health until 1843; since then she had been more or less affected with cough and dyspnœa. In 1846 she had an acute attack, with pain in the left side, and the difficulty of breathing increased. About twelve months ago, in 1845, she was treated for inflammation of the right lung and pleura. On the 5th June, 1846, when first seen by Dr. Watts, she was suffering from increase of cough and dyspnœa, attended with much debility.

On careful examination he discovered signs of emphysema and congestive catarrh of the lungs, and found the heart's action extremely feeble and irregular. The pulse was weak, irregularly intermittent and inconstant. The sounds of the heart were hurried and irregular, and clappering. No murmur was then audible. By appropriate treatment she rallied considerably; the catarrh diminished, the breathing became tranquil, and the pulse increased in force, and beat with less irregularity. On this improvement in the action of the heart a bellows murmur was heard over the cardiac region, loudest a little below and to the right of the nipple. After having been some weeks thus apparently convalescing the woman was seized with the prevailing epidemic diarrhœa and sickness, which so depressed the action of the heart that the lungs became irrecoverably congested with blood, and she died. During the last three days of her life the murmur was again silenced, and once more replaced by feeble, hurried, and irregular clappering.

Dr. Watts pointed out the fact, that the morbid sounds of the heart in this case form one of the interesting exceptions to a rule not many years ago implicitly confided in: that, "the great lesions of the valves are invariably attended with murmur." This rule, so far from being universally true, applies only in ordinary circumstances to such cases. Too much importance appears to be still attached to the murmur, and too exclusive faith reposed in its pathognomonic significance in heart-disease. Its presence, indeed, greatly facilitates the diagnosis, but even in the most favourable circumstances other signs and symptoms require strict attention before the opinion can have unquestionable authority.

That a serious disease of the substance of the heart or of its apertures, or of its valves, may exist without murmur, and that the absence of murmur does not necessarily denote the absence of valvular or other lesion of the heart, are points well illustrated by the case just related. It proves that in the same individual in the course of the same disease, murmur may be present under particular conditions, and absent under other conditions, either affecting the vital motions of the heart, or its completeness as an hydraulic apparatus.

The conditions he had hitherto ascertained by personal observation to be sometimes capable of preventing the manifestation of murmur are:—Extraordinary weakness of the contractions of the heart, serous effusion in the pericardial sac, with cardiac debility, and a glut of blood gorging the heart to great excess.

These sources of fallacy, in the application of auscultation to the discovery of heart disease, merit more consideration than they generally receive. The want of due attention to them has frequently led to the formation of wrong notions of the morbid state; whereas, a familiar acquaintance with them, by insuring a more wary investigation of the cases, and by suggesting the propriety of preceeding with caution, will sufficiently guard the practitioner from falling into any gross error in the diagnosis.

Analysis of kidney in Bright's disease; very little fat, but an excess of albuminous and fibrinous matter found.

Dr. Black read an account of a chemical analysis of Bright's kidney in the advanced stage. The kidneys were larger than in health, and mottled, and to the naked eye presented well-marked appearances of what has been called granular kidney: on inspection with the microscope, however, only very few oil-ovules could be seen.

353·5 grains of the kidney, after gentle pressure between folds of linen, were cut into very small and thin pieces, and subjected for two hours to boiling in water in a Florence flask. He obtained in this manner a milky-looking fluid of the sp. gr. 1·003 at 62°, which was filtered.

147·7 grains of firm residuum remained upon the filter; showing that 207·8 grains of the portion of kidney subjected to boiling had been taken up in solution or suspension by the water.

No fat or oil-ovules, beyond a mere trace, appeared on the milky looking fluid, which was neutral in its reaction on test-paper.

Half of this fluid was evaporated to dryness, and 30 grains of dry residuum were obtained, which residuum was not at all soluble in ether, but entirely dissolved in Liq. Potassæ.

The other half of this fluid was treated with nitric acid, which threw down a cloudy flocculent precipitate.

The firm matter, weighing 147·7 grains, which had resisted the action of boiling water, was digested in pure Liq. Potassæ: a thick brownish-coloured solution was thus obtained, which on being filtered left 10 grains of dense and thready animal fibre upon the filter.

After filtration the solution was precipitated by hydrochloric acid; and the white cloudy precipitate, when dry, weighed 30 grains.

As the principal results of his analysis, Dr. Black ascertained that one thousand parts of the diseased kidney were composed as follows:—

Albuminous and fibrinous matters .	281·6
Hydrogenous constituents . .	718.3
Salts	
Free oil-ovules—a trace . .	
	1000

He was disposed to apportion 40 per cent of the albuminous and fibrinous matters as the healthy constituents of the renal structure, whilst he believed the remainder would represent the adventitious albumen resulting from the pathological state.

Dr. Black spoke of this as being the first of a series of analyses of the kind which he is about to undertake.

Apoplectic cysts—Dissimilarity of symptoms.

Dr. Charles Bell exhibited an apoplectic cyst, with an adjoining cicatrix of the brain. The clot was all absorbed, and the cyst contained about two drachms of serum. It was lined with a yellow membrane, which, viewed through the microscope, presented innumerable inflammation-globules in an advanced state of development lying in the midst of finely granular matter.

Dr. Russell, H. M. 36th Regiment, exhibited another apoplectic cyst, lined with a similar yellow membrane, and capacious enough to have contained three drachms of serum. The microscopical examination of the yellow matter lining the cyst detected a host of inflammation-globules in a less advanced stage than the preceding. They were more globular, and each contained a large oil-nucleus; whilst in Dr. Bell's case they were somewhat flattened, and the oil had been parted with. The outward granules and the contour were the same in both. This difference of the inflammation-globules in the two cases seemed explicable by the older standing of the disease in the one than in the other.

An interesting feature in those cases was the absence of hemiplegia in the one, and its presence in the other; notwithstanding the great similarity of the lesions in both, and a striking resemblance in some other particulars. The cyst was situated in the centre of the middle lobe of the left hemisphere, near the surface, in Dr. Russell's, and at the lower part of the middle lobe of the right hemisphere in Dr. Bell's case: in the former there was temporary loss of speech only; in the latter, temporary loss of speech and permanent hemiplegia.

Nerve-ganglions after amputation—Minute anatomy.

Mr. Dumville produced a case, in which ganglions formed after amputation on the extremities of the median, ulnar, and musculo-spiral nerve, which ganglia occasioned the patient excruciating agony for years, and the suffering so disordered the faculties of the mind that he several times contemplated suicide, but ultimately recovered after a second amputation.

Thomas Parry, aged 22 years, fractured his arm by a fall twelve *years ago.* The fracture was set immediately, and the limb secured with splints. He neglected, however, to have the dressings removed until after the lapse of eight days, when the arm sphacelated; and six weeks after the full amputation was performed by a neighbouring surgeon. This operation did not prove so successful as could have been desired, for the muscles receded, and left a painful stump of a conical shape. In the course of three years the pain had much increased in severity, and three highly sensitive ganglions had formed at the divided extremities of the nerves, which gradually grew larger, and the pain became more and more agonizing, and his mind in consequence was impaired.

He first came under Mr. Dumville's care four years ago; he was then quite insane, and imagined himself under satanic influence; a belief which no reasoning could dispel. The stump was so sensitive that the slightest touch, even a drop of tepid water falling upon it, produced intolerable agony, and he felt as if the amputated fingers were constantly at work; as if twisted and cramped, especially when he used the remaining hand.

Mr. Dumville amputated the stump on the 29th of March, 1843. The pain ceased after the operation, and the patient gradually became disabused of his insane fears, and was restored to a perfectly sound state of mind.

The nerves were found after amputation somewhat reddened, enlarged, indurated, and terminated by expansion in olive-shaped bulbs or ganglia invested with the thickened neurilema. The nerve-tubes before entering the ganglia were entire and of the normal size, but the substance of the ganglia themselves consisted of finely granular matter, in which were seen innumerable fibres of extreme fineness and delicacy, extending in every direction, like as in well organised false membrane. Judging from these microscopical appearances the pain would seem, in such cases, to depend upon the following causes:—first, the existence of a morbid action allied to an inflammatory state, acting as a constant source of vital injury or vito-chemical irritation; and, second, the presence of an inflammatory product both infiltrating and compressing the individual nerve tubes.

Mr. Dumville, arguing from the above premises, suggested a very proper precaution for the management of these cases,—namely, to divide the nerves as far above the ganglia as can be done, in order, if possible, to get beyond the disease.

The evident connexion between the local irritation and the mental alienation in this case, shows the importance of always looking for such local disease, as a possible cause of mental derangements in other instances.

Aneurism of Basilar artery ending fatally.

Dr. EAGER presented an aneurism of the basilar artery near its bifurcation into the cerebral arteries. The entire tumor was small, not exceeding in size a common pea, and it had a ragged fissure, through which the blood had flowed during the fatal seizure. The position of the aneurism was in the track of the portio dura, and had obviously pressed upon the origin of this nerve, as appears from the following detail of symptoms.

William Yates, æt. 58, began to complain nine months ago of distressing pains in the head, which extended from back to front, but were not lancinating.

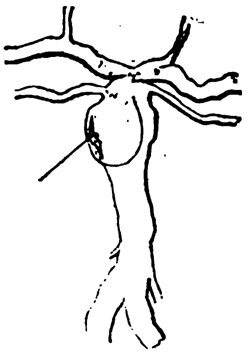
Three weeks subsequently paralysis of the right side of the face followed, and was continuous until the day of death, affecting all the parts supplied by the right facial nerve. The pains in the occipito-frontal region, at all times severe, were increased after the ingestion of food. There was no deviation of the tongue, and deglutition was naturally performed. The thoracic and abdominal viscera were all healthy.

These symptoms remained unaltered until two weeks before death, when, in the night, she was seized with hemiplegia of the left side. The tongue could no longer be protruded, the powers of utterance failed, and deglutition was so extremely difficult as to threaten suffocation at each attempt to swallow.

He continued in this state until death, which happened suddenly, during a fit of laughter caused by the conversation of a friend. Throughout the entire illness the mental faculties were unaffected, and the memory was as good as at any former time.

The body was examined 20 hours after death. In sawing through the calvarium at least two ounces of fluid blood escaped through a rent made in the membranes. Blood was generally effused over the surface of the brain. and a firm coagulum was found at the base. There was considerable serous effusion into the lateral ventricles, in the anterior portions of which coagula were also observed. The velum interpositum was broken down from mechanical pressure. The basilar artery presented the appearances seen in the woodcut, which is represented in reverse to show the fissure.

Dr. Eager remarked, that the aneurism satisfactorily accounted for the principal symptoms, and especially for the paralysis of the muscular parts supplied by the facial nerve. That the occurrence of hemiplegia could alone be accounted for on the supposition that a small fissure in the aneurismal sac, with a certain amount of hæmorrhage, had happened two weeks before death, and which, from favourable circumstances, had closed up, and thus for some days prolonged the patient's life. And, further, that the fatal attack was explicable by the presence of a great quantity of fluid blood to appearances recently effused.[*]



Peritonitis; rupture of Graafian vesicles, independent of menstruation or conception.

Dr. Renaud exhibited the ovaries of a woman, in each of which a ruptured Graafian vesicle with patent aperture was seen. The rupture happened under singular circumstances, inasmuch as it had no connection with the menstrual period or with conception.

The woman died of acute peritonitis during the child-bearing period of life. On opening the body, the peritoneum was generally coated with false membrane, as was also the duplicature investing the ovaria. The cavity of a former vesicle was observable in each ovarium. On the one ovary the coats of the follicle were ragged at the point of rupture, and the aperture was sufficiently wide to allow the introduction of a small quill; on the other the orifice whence the contents of the sac had been discharged would admit of a probe being passed, and had a more evenly defined margin. In neither instance had any yellow matter, such as is found in a spurious or in a true corpus luteum, been secreted between the vascular and non-vascular ovisacs.

The woman was not menstruating at the time of death, or when attacked with peritonitis. The lining membrane of the uterus was free from all traces of redness or congestion.

---

[*] The occurrence, within so short a period, of two such rare aneurisms as the present, and the one exhibited at the meeting in July by Dr. Francis, contrasting so remarkably in their symptoms both before and at the period of death,—in the absence of suffering during life, and the comparatively slow death in the one case, and the long continuance of the pain, and the instant death in the other,—excited a lively attention. The reason for the presence of so much pain in the one case, and its total absence in the other, would appear to form an interesting subject for further investigation.

Dr. Renaud stated his belief that this case was the first on record of such appearances being found in the human ovary unconnected with the catamenial period or pregnancy; and although in itself it might bear the semblance of insignificancy, yet, considered in a medico-legal point of view, it was entitled to be looked upon as an important addition to our knowledge of this obscure branch of physiology. It went to prove, that, under particular circumstances, so great increase of the serous secretion of Graafian vesicles could obtain, through pathological causes, as to occasion the shedding of their contents, independently of any special physiological action associated with the functions of these parts.

Medical Trials and Inquests.

NORFOLK SUMMER CIRCUIT.

Bedford, Wednesday, July 15th.

NISI PRIUS.

(Before Mr. Justice Williams.)

Bailey v. *Langley.*

The following case is of importance to those members of the profession who hold the license of the Apothecaries' Society. It shows that in an action for the recovery of a just debt the proceedings will not be set aside for an absurd technicality respecting the authentication of the seal attached to the license. The document proves itself.

This was an action for the recovery of the amount of a bill for medical attendance and medicines.

Byles, Serjt. (with him **Keane**) for the plaintiff, put in a certificate from the Apothecaries' Company to the plaintiff, authorizing him to practise as an apothecary. This document bore a seal which purported to be that of the corporation, but none of the witnesses could profess to identify or authenticate it as being an impression from the seal of that body.

Worledge, for the defendant, thereupon objected that the case for the plaintiff had failed. The plaintiff was bound to shew that he had practised as an apothecary on the 1st of August, 1815, or that he had obtained a certificate to practise as such from the Apothecaries' Company. By the 6 Geo. 4, c. 133, s. 7, the common seal of the Company of the Apothecaries is deemed to be sufficient proof of the certificate, and that the person named therein is qualified to practise; but he submitted that it was incumbent on the plaintiff to go further, and to prove that the seal attached to the document was itself genuine and authentic. As far as the case went at present, it only appeared that the witnesses had seen and acted on copies of the same seal on other certificates, but that did not authenticate the seal in question as that of the corporation.

Byles, Serjt. and **Keane** contended that there was no necessity whatever for any proof at all. The mere production of the document, as the certificate required by law, and purporting to bear the seal of the company, was enough. In fact such a seal proved itself, as was enacted by the recent stat. 8 and 9 Vict. c. 113, the 1st section of which, after reciting that, "by many statutes, various certificates, official and public documents, documents and proceedings of corporations, and of joint stock and other companies, and certified copies of documents, bye-laws, entries in registers and other books, should be receivable in evidence of certain particulars in courts of justice, provided they be respectively authenticated in the manner prescribed by such statutes, and that the beneficial effect of those provisions had been found by experience to be greatly diminished by the difficulty of proving that the said documents were genuine, and that it was expedient to facilitate the admission in evidence of such and the like documents," proceeds to enact, "that whenever, by any act now in force, or hereafter to be in force, any certificate, official or public document, or document or proceeding of any corporation, or joint-stock or other company, or any certified copy of any document, bye-law, entering in any register or other book, or of any other proceeding, shall be receivable in evidence of any particular in any court of justice, or before any legal tribunal, or either Houses of Parliament, or any committee of either House, or in any judicial proceeding, the same shall respectively be admitted in evidence, provided they respectively purport to be sealed or impressed with a stamp, or sealed and signed, or signed alone, as required, or impressed with a stamp, and signed as directed by the respective Acts made, or to be hereafter made, without any proof of the seal or stamp, where a seal or stamp is necessary, or of the signature, or of the official character of the person appearing to have signed the same, and without any further proof thereof, in every case in which the original record could have been received in evidence." The effect of this enactment was to do away with the very objection now before the Court; and it was therefore contended that no evidence at all was required to authenticate the document or the seal.

Williams, J.—That is so. This is the certificate of the Apothecaries' Company, and purports to bear the seal of that corporation. It therefore falls expressly within the letter and spirit both of the 8th and 9th Vict. cap. 113, s. 1, and requires no authentication of the seal. I shall receive it.

The case then went to the jury on the merits, and terminated in a verdict for the plaintiff for £8. 4s. 6d.—*Law Times.*

Selections from Journals.

SURGERY.

RECOVERY FROM SEVERE GUNSHOT WOUNDS.

The following illustration of the effects of youthful vigour in restoring mutilated parts, drawn from the practice at the Hôtel Dieu, during the memorable three days of July, 1830, was related to Dr. Parrish by Dr. Ashmead, who witnessed the case.

"A little boy, about ten years of age, who became fired with the popular enthusiasm in favour of liberty, supplied himself with a pistol and a flag, and mounted the wall of an enclosure which contained a number of French soldiery. The moment he reached the top, he received several bullets, and fell back upon the ground. On being conveyed back to the hospital, he was examined by Dupuytren, whose attention was at first chiefly attracted to a wound of the thigh with comminuted fracture of the bone. He immediately decided on an operation, and preparations were made to perform it. While this was going on, however, Dupuytren discovered that the opposite thigh was similarly wounded, and that the boy had also been shot in the fore-arm and arm, the bones being fractured. He pronounced the case hopeless, ordered the wounds to be dressed, and passed to the next patient. To the surprise of all parties, this little boy recovered, and, though lame, had useful limbs."—*St. Louis Medical and Surgical Journal.*

THE "ADJUSTER."

Dr. G. O. Jarvis (of the United States) the inventor of an instrument called the adjuster, already alluded to in the Gazette, thus describes the uses of his apparatus.

"I will firstly remark that the object of this instrument is to reduce all dislocations, to adjust all fractures, and to maintain coaptation of all fractured bones where the principle of extension and counter-extension is necessary to accomplish either of those ends; and also, that the surgeon, in using it, has entirely at his command a power equal to *that of* twelve men, all or any part of which he can apply at pleasure, with his own hand, in the most gentle and steady manner. This privilege alone, it would seem, secures to the surgeon advantages worthy of his highest consideration; yet this is by no means the whole or even the chief benefits to be derived from the use of this instrument. In dislocations, for example, he is relieved from those embarrassments which the application of power, operating from fixed points, over which he can have no control, frequently subjects him, he being able to give the same free motion to a limb during the application of force by this instrument, that he could were it not in use; the benefits of this, for relieving the head of the bone, as in some cases of dislocation of the hip and of the shoulder, must be obvious, while it is also of equal importance in many other cases. In fractures, too, he is enabled to apply extension in any position of the limb he may choose to adopt: by this means he can so relax the muscles of any limb that the least possible degree of extending and counter-extending force may be required to restore the limb to its full normal length; while the fractured portions are also inclined by the action of the muscles into a normal line of the shaft of that bone. He can also confine the points of extension and counter-extension within the limits of any given line, thus making the line of extension in the exact line of the shaft of the bone. He is also able with this instrument, in fractures of the neck of the thigh-bone, to restore a normal length to that neck, without which, although the fracture may be outside of the capsular ligament, yet must osseous union remain extremely doubtful: while on the contrary, by restoring that length, preserving at the same time perfect rest, we may reasonably entertain strong hopes of recovery, except in cases of the aged and infirm.

Dr. Jarvis adds that the instrument is now manufactured and sold by Messrs Weiss and Son, 62, Strand.

The Editor of the Provincial Medical and Surgical Journal further observes that the instrument here referred to was exhibited by Dr. Jarvis at the last meeting of the Provincial Medical and Surgical Association, and the modes of employing it exemplified and explained; and that the greatest interest in his communication was manifested by the surgeons who were present on that occasion."—*Provincial Medical and Surgical Journal.*

SPECIAL PATHOLOGY.

SERIES OF CASES OF CENTRAL LESION OF THE BRAIN.

The following recently published cases illustrate in so interesting a manner various points connected with central disease of the brain, that we have thought it right to insert them in a continuous series:—

CASES OF DEATH FROM RUPTURE OF ARTERIES AT THE BASE OF THE BRAIN.

BY DR. D. I. T. FRANCIS.

CASE I.—W. E., aged 56; formerly a smith. This man had been disabled for four or five years past by a partial palsy of the left arm and leg, which had not, however, prevented him from enjoying good general health.

March 19th, 1843, he was standing up, in the middle of the day, passing his water, when he was observed to glide easily to the ground: he gave two or three short cries, accompanied, so far as I can learn, by a long-drawn inspiration, but there was no struggling. Within two minutes after he fell, being close at hand, I saw him; but, from this time, there was no attempt at inspiration, the whole [pulmonary] apparatus being quite motionless, although the heart continued to beat, pretty forcibly at first, and afterwards with a series of three or four faint pulsations, and gradually lengthening intervals, for nearly three minutes after I first saw him. The face was not remarkably livid; the pupils were somewhat, but not much, dilated. From these circumstances, an effusion of blood interfering with the respiratory portion of the medulla oblongata, and annihilating the perception of a "*besoin de respirer*," was predicted. It was ascertained that prolonged efforts were usually made by this man during micturition.

Sectio cadaveris.—The whole of the pia mater at the base of the cerebrum was loaded with blood, which had extended upwards so as to involve the larger portion of the upper and lateral surfaces of the left hemisphere, and to a less extent, but in a similar manner, on the right side. The same effusion had penetrated beneath the arachnoid investing both surfaces of the cerebellum, as well as around the medulla oblongata. This latter part was also the seat of special compression, from some clots in the fourth ventricle. The blood effused, with the exception just referred to, seemed to occupy the meshes of the pia mater, and extended deeply and generally between the convolutions of the portions involved; but in no point, although the brain was sliced very carefully, did it appear to have penetrated beyond the surface. The cerebral surface generally was rather soft, but especially the middle lobe of the left hemisphere. No trace was found of any antecedent clot. The lateral ventricles contained neither fluid nor blood. The arteries at the base were studded with opaque yellowish spots of atheroma; and on gently throwing a current of water into the basilar *artery, two good*-sized jets sprang from apertures in the posterior cerebral arteries, equidistant one-fourth of an inch from their junction with the basilar. The aperture in either artery would have nearly admitted a crow-quill, and was, in both cases, in the inferior surface of the vessel. No remarkable appearances were presented by the thoracic and abdominal viscera, except that there was some mottling of the kidneys.

CASE II.—D. P., aged 58. Six years previously to his death became the subject of partial hemiplegia of the right side, from which he in great measure recovered. Since that time he had led an inactive life, chiefly in the workhouse, and had remained in good health. On a forenoon in August, 1843, having been absent for a minute in the water-closet (which led out of the dwelling-room) he was heard to fall on the floor. At the time of the occurrence, being in another part of the ward in which it happened, I had the opportunity of observing the progress of the symptoms. There was no utterance; the countenance assumed a leaden sub-livid hue, and coma rapidly advanced. The right arm was, with a faltering ill-directed motion, carried to the head. Respiration was slow and heavy, without much stertor, the intervals between the efforts gradually increasing. The pulsation at the heart and wrist were full and powerful, and continued most distinctly for some time after all attempts at respiration had ceased. The pupils were, at first, contracted, and afterwards somewhat, but not greatly, dilated. Death took place in about eight minutes.

Sectio cadaveris.—On removing the calvarium the superficial sinuses were found full of blood, and the hemispheres rose up into pointed fluctuating tumors. Each ventricle contained about four ounces of bloody serum, besides a large quantity of florid clot. The central parts about the fornix, as well as the walls of the ventricles, were broken up into a flocculent pulp. On turning to the base, the pia mater was found loaded in all directions with recent coagulated blood, so that no nerve or other important part could be seen that was not surrounded and mixed up with the effusion. The fourth ventricle was much distended with a clot, which, after firmly investing the medulla oblongata, passed down the spinal canal as far as inspection from the cranium would permit it to be seen. The pons varolii and other parts in the median line, especially the basilar artery, were much displaced towards the left side by the superior pressure of the effused blood from the opposite. No traces of atheroma or opacity were observed in the posterior cerebral or basilar arteries; a stream of water thrown into the latter escaped in profusion from the vessels which branch off into the fissure of Sylvius, and which were becoming opaque, thickened, and rigid in structure; and although the naked eye did not clearly detect any ruptures in these vessels, there could be no doubt, from the manner in which the water escaped, of their existence. The lungs were, with the exception of a patch of old pneumonic induration, healthy; pericardium adherent almost throughout; left ventricle nearly double the natural thickness, scarcely at all dilated; right side good: all the valves healthy. Kidneys both far advanced in Bright's disease, the cortices being white, contracted, and granular, and the whole organ much diminished in size.

Among other judicious remarks which Dr. Francis has appended to these cases the following observations occur:—

Independently of the pathological interest which attaches to these cases, they are alike characterised by a remarkable symptom, which, as it was carefully observed, could not fail to arrest the attention; I mean, the decided manner in which the action of the heart and the pulse at the wrist were prolonged, after the respiration had completely ceased. This circumstance was obviously due for its cause to the especial manner in which the hæmorrhage that had taken place had compressed the medulla oblongata, and so annihilated the function of the part which presides over the respiratory movements, whilst the heart, being less completely under the influence of that portion of the nervous system, had continued in its action, ceasing only from the obstructed circulation through the lungs. Experiment and previous pathological observation had long since established the fact of the dependence of the respiration upon the integrity of the medulla oblongata; but the availability of the priority in cessation of the action of the heart or lungs, as a means of elucidating the causes of sudden death, appeared further to be an object well worthy of careful investigation. — *Guy's Hospital Reports.*

CASE OF ANEURISM OF THE BASILAR ARTERY.

BY M. PFEUFER.

A MAN, aged 41 years, had for many years experienced an occasional inability to swallow. After suffering for a long time from severe headache, he was suddenly seized as with an apoplectic stroke, during which the breathing was stertorous, the eyes open, the fæces and urine passed involuntarily. He recovered, however, in a few days, when he had a second similar attack, commencing with constriction in the pharynx, but not followed by complete loss of consciousness. *He recovered, but on his* entry into the hospital presented the following symptoms. He was thin and weak-looking, and complained of a pain and stiffness across the spine, and in the lower extremities. He had headache, with sensation of pressure on the brain, and constant ringing in the ears. His speech was quick and indistinct, and his voice hoarse. He was seized again with loss of sensation, &c. a few days after being in the hospital, with dilated insensible pupil, stertorous breathing, involuntary evacuations of urine and fæces, &c. He continued to scream without being able to speak, but recovered under copious bloodletting, ice to the head, blisters, &c. Fifteen days after this attack he suddenly expired.

The pia mater was raised by serous infiltration. The surface and posterior part of the hemispheres of the brain were tinged with alternate spots of deep and faint red, and reddish yellow, due to a layer of extravasated blood, partly old, partly recent, lying between the membrane. Bloody serum filled the ventricles. The fornix was in part destroyed; the median parts of the brain softened and injected; the aqueduct of Sylvius filled with a fresh clot of blood; and the peduncles of the brain injected and softened in their superficial layers. The pons varolii, medulla oblongata, and cerebellum, were covered by a layer of recently coagulated blood. On the right side of the basilar artery there existed an aneurismal sac of a reddish-blue colour, four lines long and three lines broad, filled with clotted blood, and pierced at its anterior and lower part with an orifice of the size of the head of a pin. The artery in the neighbourhood was atheromatous, and several of the other arteries presented patches of the same degeneration. In the spinal canal there was a thick newly-formed clot of blood between the pia mater and the arachnoid membrane. On many points, marks of old sanguineous extravasations, of a brown colour, were remarked. The external layer of the spinal chord was coloured of a saffron-yellow colour. The abdominal and thoracic viscera were healthy. — *Edin. Med. and Surg. Journal.*

[REMARKS.—The above case is interesting, from being the only one with which we are acquainted where the discharge of blood from an aneurism of the basilar artery was not followed by immediate death. Two cases of hæmorrhage from this vessel were related some time since at the London Medical Society; in both of these instances death occurred almost instantaneously. In the present case, the slight degree of extravasation which at first occurred must have been due to the circumstance of the sac having become perforated by ulceration, not by rupture. This case is also important in d complained of feeling very ill; said was losing his sight, and having roperty in his possession, he wished ive assistance; he then became le, and had a slight convulsion, assed off in a few moments: not re- g his consciousness, he was brought hospital. On admission there was e insensibility; he could not be in the slightest degree; the extre- were relaxed and paralysed; pupils ted; irides insensible to the stimulus t; respiration easy, and attended very slight degree of stertor; pulse hortly after being placed in bed, his d neck were observed to become ngested, and of a dark purple ; his chest and larynx became fixed; ion was suspended; the pulse, feeble rmittent, at last ceased to be felt; s were stretched out; head drawn mouth open. Thus asphyxiated, he ed for a few seconds, when a long spiration, succeeded by others of a ; character, took place; the muscles relaxed; the face resumed its proper ; the pulse returned; and he appeared, n admitted, in a state of perfect coma. ch as the above returned in quick ion, and he died in about two hours alf after admission.

psy. 18 hours P.M.—On removing lvarium the surface of the brain was d to be very moist; the arachnoid , and raised by serous exudation; the les contained about two ounces of erum; the choroid plexus presented vesicles filled with an opaque straw-

medium of the three great divisions of the cerebro-spinal axis, would induce us at once to infer that extensive lesion of it must necessarily and quickly lead to fatal consequences. A less degree of injury is, however, by no means so fatal. Several cases are related by Cruveilhier, in his Anatomie Pathologique, in which appearances indicative of former extravasation were found in persons who died of other diseases.—*Report of the Liverpool Pathological Society; Edinburgh Med. and Surg. Journ.*

[REMARKS.—When the extravasation into the pons occurs laterally, or takes place in its centre in very small quantity, or very gradually, death does not occur immediately. Within the last ten years three cases of death from extravasation of blood into the substance of the annular protuberance have occurred within our observation. In two of these instances the patients appeared as if suddenly stricken down, and expired almost immediately. In the third, death took place within two hours of the first seizure; in this last it was probable that, although the effusion found after death was large and central, the whole of this blood was not poured out at once.—ED. GAZ.]

. . . .

CASE OF SOFTENING OF THE PONS VAROLII —LEAD DETECTED IN THE CEREBELLUM.

BY THOMAS INMAN, M.D.

A PAINTER, of robust frame, æt. 24, was admitted into the Liverpool workhouse with sloughing of the nates, August 29th, 1844. States that he was always a healthy man memory have been gradually failing since the commencement of the disease.

On admission the muscles of the face were unaffected; both pupils dilated, but obedient to a strong light; tongue protruded slightly towards the left side. The left arm is weaker than the right, but he can grasp pretty firmly with both. The left leg is completely paralysed and almost deprived of sensation, a hard pinch or prick being necessary to excite it. The right leg is weak, but he has command over it, and its sensation is tolerably perfect. No reflex motions excited by any irritant. There is no priapism. Urine and fæces passed involuntarily. Complains of dull, heavy, frontal pain. The mind is weakened, the memory impaired. There is an appearance of hebetude like that in typhus. The tongue is dry and brown; the teeth covered with dark sordes; the speech is hesitating; the enunciation imperfect. Pulse 96, soft; respiration easy, abdominal. No delirium or coma; sleeps well; appetite bad. There is no blue line round the gums; says he has never had syphilis, or any injury of the head. There are extensive sloughs, which have not as yet begun to separate, over the sacrum and trochanter. Before he came into the house he had been cupped, bled, and blistered, but without relief. On his admission, a long issue was made over the sagittal suture, and kept open by peas; and wine was freely administered. Under this treatment he rallied for a time. The sloughs separated; the healing process commenced; the tongue became moister and cleaner; the pulse fell to 60, and the frontal pain abated. On the 13th of September, however, he was seized with severe pain in the stomach, and vomiting; was found pulseless; the trunk and extremities cold and covered with a clammy sweat; his face red and flushed, but quite cold. His lungs were, however, unaffected. Stimuli had no effect upon him, and he died in a short time, apparently of exhaustion.

Sectio cadaveris, 24 *hours after death.*—Face and scalp greatly congested; calvarium dense and thick; membranes greatly injected, but not thickened or opaque. Brain was extraordinarily firm; lateral ventricles contained about four ounces of transparent serum, and their lining membrane was slightly rough. A good deal of fluid was found also at the base of the brain. No other lesion was detected till the pons varolii was divided, when a number of small foramina were noticed filled with softening matter, more numerous on the right than the left side, and giving the idea, when they had been subjected to a stream of water, as if they had been made by worms. On making a section on the right side, a cavity was found large enough to hold a small pea. The white and grey parts of the pons were distinct, and both equally affected. The rest of the pons seemed perfectly healthy. On incinerating the cerebellum, treating it with nitric acid, and testing it by iodide of potassium, sulphuretted hydrogen, and metallic zinc, I found that it contained a very distinct quantity of lead*, which I was able to exhibit deposited upon zinc wire in the form of arborescent crystals.

CASE OF CEREBRAL DISEASE.

Mr. May related the following case at the Reading Pathological Society:—

Mr. L., aged 46, married at 29, of full habit, with short neck, dark complexion, irritable temperament, a rather free liver, ale being his principal beverage, of retiring habits, but active and industrious. He had acute rheumatism at the age of 19, prolonged for twenty weeks; and had also suffered five attacks of gout. His previously ruddy face had now become pale, and he complained occasionally of double vision, giddiness, sleepiness, and impaired memory. In April, 1841, he had diarrhœa, followed by restlessness, a confused and bewildered expression, and conduct similar to that from the excitement of intoxication. His sleep was now disturbed, memory worse, and intellect perturbed; his articulation slightly altered. In October, 1841, he had an attack of epilepsy, followed by retention of urine, but recovered to much the same condition as before. In April, 1842, he had a similar but more severe seizure, followed by mania, which continued about twelve months; he then became fatuous, and gradually sunk into a state of amentia. He did not articulate during the last twelve months of his life, could not distinguish persons, and showed no other evidence of consciousness than a smile at being washed or shaved, and at certain articles of food, and by contortion of countenance, and aversion of head, when offered medicine, or disturbed. He was constantly recumbent, uneasy in any other posture, and became pale and faint when raised. During the last eighteen months, (and coincident with the loss of mind), the flexors of both hands were contracted, with ridigity of the muscles of both arms, and loss of voluntary motion, irritability and tone being augmented. About once in each month at first, and afterwards once a fortnight, he had convulsions more or less general, during the existence of which the fingers were extensible. With the exception of one toe, the lower limbs were not contracted, and were but slightly affected with ic movements; the voluntary power ined. Since Christmas, 1843, he ent dislocation of the jaw, produced n, which was readily reduced by the palate when the spasm had During the last month, it was d also by cough, but refused the otory influence, and required some reduce it. The *senses* of sight, , and taste, were but little, if at all, ; the senses of hearing and touch alted; the circulation was feeble; on natural; temperature rather low; ly slept well; the nutritive functions ffected throughout the entire illness; els responded to, but did not act medicine. During the last two ere was incontinence of urine—it ed apparently without consciousness. he last six months, he was annoyed , and a collection of mucus about es, without voluntary power to ate or dislodge it; his deglutition ame gradually feeble and difficult: iation was observed until the last t of his life, during which time he ly unable to swallow, and the dislo- the jaw was frequent. He became and comatose, and died in August, He was preserved from bed-sores ws of bran, and the urine was in a bottle, the genital organs re- free from excoriation.

---

* M. Devergie states, that the whole of the organs of the animal body are found upon analysis to contain traces of lead and copper, but, of course, in far less proportions than Dr. Inman describes.

ination fifteen hours after death.— f head not peculiar; scalp pale and s; cranial bones thickened in front ably, and slightly at the back, thin des, hard and bloodless; no diploe; ter attached loosely to the cranium; nes vascular, opaque partially, and d, particularly at the base; the id cavity and the ventricles distended id, about a pint; vessels turgid; grey and fibrous structures of the n rather firmer than natural, the um softer. The anterior part of the each hemisphere was of a deep hue. The plexus choroides in each ventricle, at its posterior cornea, d a tumor about the size of a 's egg; the pons, crura, medulla, ves natural. No other part of the amined.—*Provincial Med. Journal.*

PATHOLOGY.

OF CONGENITAL FISSURE IN THE NECK.

PROFESSOR ALLEN THOMSON.

meeting of the Medico-Chirurgical of Edinburgh Dr. Thomson read of three cases of *congenital fissure* in the side of the neck, of the same nature as those described by Dr. Achersohn, of Berlin, in his Inaugural Dissertation, published in 1832. Dr. Thomson began his communications with an account of the general results of Aschersohn's observations on eleven cases, and an explanation of the manner in which that author, and after him, embryologists in general, have referred the congenital fissures in question to the abnormal patency of one or more of the bronchial clefts, discovered in the vertebrated embryo by Rathke, in 1825. Dr. Thomson then detailed the history of three cases which had come to his knowledge in Edinburgh. The first of these cases is that of a young man of seventeen, now residing in Edinburgh, presenting a marked example of the fissure on the right side of the neck. The external aperture of the fissure is situated in the skin covering the anterior border of the sterno-mastoid muscle, and about midway between the jaw and clavicle. A common surgeon's probe may be passed about half an inch into the fissure; but a thinner probe runs, without more than the slightest possible force being applied, to the distance of nearly two inches, in a direction upwards below the skin, platysma myoides, and fascia, towards the pharynx, or great cornu of the hyoid bone Four years ago, when the case was first carefully observed, the probe was passed very easily to the depth of two and a half inches in the same direction. Upon one occasion, when the probe was passed the length now stated, the young man thought he felt matter pass into the throat; and upon all occasions, when the probe is passed to a considerable depth, a tickling cough follows; circumstances which, as in some of Aschersohn's cases, lead to the view that the fissure is connected with the pharynx. It may also be mentioned that, on pinching up the skin near the external aperture with the fingers, a cord-like prolongation is felt in the direction in which the probe passes; and that when the lad swallows, the skin immediately surrounding the external aperture is drawn up and slightly puckered. The external aperture is frequently closed by a scale or scab; but at other times, a glairy fluid exudes from it, and a long gelatinous thread may occasionally be pressed out of the fissure. The existence of the aperture was noticed by the parents of the lad a few weeks after his birth, and in the interval of four years between the separate observations made by Dr. Thomson, no material change in its appearance had taken place.

The subject of the second observation was a man twenty-six years of age, in whom the external aperture occupied the place which, according to Aschersohn's results, appears to be its common seat; viz. the space between the sternal and clavicular attachments of the sterno-mastoid muscle, and about half an inch above the clavicle. In most other respects, the appearances were the same as in the case previously noticed. The probe had not been passed much further than an inch and a half in an upward direction. With a view to the eradication of this malformation, Dr. Gairdner, in May last, laid open the sinus, by dividing skin, platysma, and fascia, in front of it, and has since adopted the usual measures for healing the opening from the bottom. The wound was not entirely closed at the time when the case was communicated to the Society; but it was so much so, as to lead to the confident hope of the operation being ultimately attended with complete success.

In neither of the preceding cases did hereditary tendency to the occurrence of the imperfection appear; for none of the relations had been known to be similarly affected.

The third case, which was observed by Dr. Duncan a few years ago, was in some respects similar to the preceding. It appeared chiefly interesting, as being the only case hitherto observed, in which, when the fissure was confined to one side of the neck, it had its seat on the left side. In three of Aschersohn's cases, both sides of the neck were affected; in the remaining eight, as in the two other cases described in the present communication, the fissure was situated on the right side; but in Dr. Duncan's case, as before stated, it was on the left. The author made this communication to the Society, in the hope that additional information might be obtained with regard to the peculiar lateral cervical sinuses described, by the collection of cases observed by other members of the Society, whose attention had been thus directed to an imperfection which might otherwise have passed unnoticed by them.—*Northern Journal of Medicine.*

Correspondence.

PRIZES AT THE WESTMINSTER HOSPITAL.

Sir,—A paragraph appeared in the *Lancet* of last week, stating that the annual distribution of Prizes had this year been withheld at this school. On behalf of the lecturers and myself, I beg most emphatically to deny the truth of this statement; and we beg of you to give publicity to our contradiction of this assertion. The following books and instruments were awarded as Prizes:—Andral's Clinical Medicine, Watson's *Lectures*, *Fresenius'* Qualitative Analysis, Bell *on the Nerves*, *Barnett's* Botany, Hooker's British Flora, a Case of Obstetrical Instruments, and a Geological and Mineralogica Case for Blow-pipe Analysis, together wid an extra Prize, given by Dr. F. Bird am myself, to the second candidate in botany These Prizes were distributed among th following gentlemen:—Mr. Collins, Mr Mullins, Mr. Tapson, Mr. Wales, and Mr Price.

In two classes, the answers of candidate were not deemed by the examiners of sufficient merit to deserve a Prize.

The lecturers would not have considere it necessary to make this statement public but that a series of articles have, from tim to time, appeared in the *Lancet*, based o erroneous information communicated to th editor, not intended to correct or criticis any real neglect or abuse in the school, bu calculated merely to bring into discredit an ridicule those who possess the co[illegible]dence an esteem of the students.—I am, sir,

Your obedient servant,

W. R. Basham,

Physician to the Hospital, and
Hon. Sec. to the School.

Aug. 18, 1846.

ON THE NECESSITY FOR THE MEDICAL SUPERVISION OF DISTRICTS IN RELATION TO PUBLIC HEALTH.

Sir,—The fear of another visit from "th cholera," the great prevalence of that species of complaint during this summer, an the passing of a bill in parliament to enabl the Privy Council to remove all cause favouring the spreading of so fatal a disease render doubly interesting to us any practical information we can obtain on the subject; and we are, therefore, much indebte to you for your extract from Dr. Copland' Dictionary, in your last number, of th history of the progress of cholera over th globe. In addition to this, I beg permission to remind my professional brethre that, in the twenty-seventh volume of th Medico-Chirurgical Transactions, I hav given copious extracts of the ravages of th disease in our own country, taken from th reports preserved in the Privy Counc Office.

The extreme variation in the number cases here recorded in each town or villag attacked, shews the necessity of minutel investigating what local causes can hav produced such an effect, and whether suc causes still exist, as they ought certainly t be forthwith removed; but this can only e done by strong representations from th medical men of each district, stating distinctly, in a memorial to the authorities, th various sources of disease they have observed, and especially remarking if the can trace the origin of any other epidemi to the same cause, as has been so ably don by Dr. Laycock in regard to this very subject in the city of York; whereof the account may be read in the first report of the Commissioners for inquiring into the state of large towns and populous districts.

Not only will such information be highly valuable should the cholera again invade our island; but it will also be of great service, I doubt not, in forwarding the views of our present government with regard to the sanitary reform now under their consideration.—I remain, sir,

Your obedient servant,
S. Wm. Merriman, M.D.

34, Brook-Street, Aug. 22, 1846.

Medical Intelligence.

UNIVERSITY OF LONDON.

BACHELOR OF MEDICINE. — FIRST EXAMINATION, 1846. EXAMINATION FOR HONOURS.

Anatomy and Physiology.

Habershon, S. O. (Exhibition and Gold Medal,) Guy's Hospital.
Littleton, Thomas (Gold Medal), University College.
Hugo, Charles Sayer. University College.
Eade, Peter, King's College.
Savory, William Scovell, St. Bartholomew's Hospital.

Chymistry.

Habershon, S. O. (Gold Medal), Guy's Hospital.
Cammack, T. A. (Gold Medal), University College.
Eade, Peter, King's College.
Bholanoth Bose, Medical College of Bengal and University College.
Hugo, Charles Sayer, University College.
Littleton, Thomas, University College.
Palmer, Edward, University College.
Wilks, Samuel, Guy's Hospital.

Materia Medica and Pharmaceutical Chymistry.

Habershon, S. O. (Exhibition and Gold Medal), Guy's Hospital.
Burgon, Joseph (Gold Medal), University College.
Wilks, Samuel, Guy's Hospital.
Bholanoth Bose, Medical College of Bengal, and University College.
Eade, Peter, King's College.
Hugo, Charles Sayer, University College.
Palmer, Edward, University College.
Cammack, Thomas Armstrong, University College.
Gopal Chunder Seal, Medical College of Bengal, and University College.

POISONING BY BELLADONNA.

An inquest was held last week at the London Hospital, before Mr. Baker, Jun., on the body of Thomas Parker, who died on Monday from the effects of eating poisonous berries, suspected to be those of the deadly nightshade. A child named Samuel Jones, aged three years, died in the same hospital on Tuesday from a similar cause. There are three other persons in a dangerous state in the hospital who have partaken of poisonous berries, and the greatest excitement prevails on the subject. A long inquiry was gone into, from which it appeared that on Saturday afternoon the wife of the deceased purchased a pint of berries from a man in the garb of a countryman, which she made into a pie, of which her husband and herself partook on Sunday. While they were eating the pie, the child of a customer (the deceased Jones) came in, and they gave him some. About two hours after eating the pie, the witness, her husband, and the child, were violently affected with pains in their limbs, drowsiness, and convulsions. A medical gentleman was called in, who attempted to administer emetics to the sufferers; but Parker was unable to swallow them, and became delirious. The unfortunate man died on the following morning, after enduring great agony. The child expired 24 hours afterwards. Mrs. Parker, in answer to questions by the coroner, said the man who sold them called them whortleberries. She was a country-woman, but had never heard that name before. A long discussion took place, and it was agreed to adjourn the inquiry, to afford the police an opportunity of finding the man who sold the poisonous berries.

Independently of these two fatal cases, it would appear from an examination which has taken place before a magistrate, that several other persons who had purchased these berries of the prisoner—a herb-gatherer, as he styles himself—have suffered from paralysis and other severe symptoms. The prisoner has been remanded on a charge of manslaughter.

CAUSE OF THE FAILURE OF VACCINATION IN FRANCE.

M. Testel adopts the opinion, that the vaccine virus is liable to undergo degeneration, and therefore requires to be occasionally renewed. He thinks, however, that the facts admit of an explanation entirely different from that which is generally received. He endeavours to show that the distinction hitherto made between genuine and spurious vaccination is insufficient, and that an intermediate state exists. He calls this a mixed form of vaccination, in which there is a *preservative power* for a longer or shorter period, and in a greater or less degree. In his view the vesicle formed under these circumstances, has been hitherto confounded with the true vaccine vesicle, and from this has arisen the opinion that the vaccine virus has undergone degeneration and that re-vaccination is necessary."—*Comptes Rendus.*

POSTPONEMENT OF THE MEDICAL REGISTRATION BILL.

THIS bill has shared the usual fate of measures intended for the improvement of the profession or of the public health; that is, it has been postponed until the *next* session. On the occasion of its withdrawal, the Minister announced that many representations had reached him on the measure, several favourable to it, but some also against it. He thought the principle of the bill a good one; and if it were postponed until the next session, every assistance should be given in removing objections to it. The plea for its postponement was, that it was hardly possible now to insure it a fair consideration. For some reason or other this plea is allowed to have very little influence in preventing the passing of those measures which do not bear upon medical subjects, although they have an important influence on the interests of large sections of the community. The opposition of the Presidents of the Colleges of Physicians and Surgeons, and of the Master of the Society of Apothecaries, is stated to have been the cause of the postponement.

RECOVERY FROM A LARGE DOSE OF NITRE.

IN a recent number of the Provincial Journal, Mr. Gillard reports a case in which a man swallowed two ounces of nitrate of potash by mistake for Epsom salts. In about five minutes he felt a burning pain in his stomach, and this was immediately followed by sickness. Some mustard was given to him, which caused copious vomiting, and by the aid of warm water the stomach was emptied. He still complained of a burning pain in the epigastrium when Mr. Gillard saw him. Magnesia, tincture of opium, and diluents, were given to him, a full dose of castor oil. In four days the man completely recovered, and returned to his work.

The recovery was most probably due to the early exhibition of an emetic, and the ejection of the irritating salt from the stomach.

EXPERIMENTS ON THE NEW ANTIDOTE FOR PRUSSIC ACID.

IN the course of the last year, we announced that Messrs. Smith, chemists, of Edinburgh, had proposed, as an antidote for prussic acid, the mixed oxides of iron, whereby insoluble and inert Prussian blue was speedily formed.

M. Larocque has been lately engaged in performing some experiments with a view of testing the practical efficacy of this antidote; and he has arrived at the following conclusions:—

1. That the alleged antidote has no effect whatever when prussic acid has been taken in the anhydrous state. The rapidity with which this poison causes death is too great.

2. The same objection applies to its use when the anhydrous acid has been swallowed diluted with its volume of water.

3. That good effects may follow its use when it is employed at the commencement of symptoms, and the dose of the medicinal acid is about from sixteen to twenty-five grains.

4. That when the medicinal acid is diluted with a large quantity of water, there is in most cases great hope of recovery.

5. That chlorine increases the efficacy of the antidote.—*Gaz. Med.*

CASE OF ALLEGED UTERINE RESPIRATION.

IN November 1845, M. Tourtois was called to attend a female in labour, who had already borne several children. The membranes had become ruptured, and the waters had been discharged about an hour before his arrival. The labour pains were strong. The head was descending into the pelvis, and in attempting to give it a better direction, M. Tourtois introduced two fingers into the child's mouth, when, to his surprise, he felt them sucked or drawn in with some force. Others who were present satisfied themselves of the existence of this phenomenon; and at intervals for more than half an hour, the child, which thus breathed before birth, continued to suck the finger of the accoucheur with great energy. The woman, after some hours, was delivered of a lively female child, which sucked the breast vigorously an hour after its birth.—*Ibid.*

⁂ Admitting that the act of sucking was real, and that air was drawn into the lungs of the child, it will be observed that the rupture of the membranes, the descent of the head, and the introduction of the hand of the accoucheur, all tended to favour the imperfect act of respiration before birth. To apply to it the term uterine respiration, is, under these circumstances, quite inappropriate.

THE MELTING POINT OF PHOSPHORUS.

M. DESAINS has lately made some experiments on this subject. According to him, most chemical writers state that phosphorus melts at 109° (104°?). In order to determine the temperature of fusion, the phosphorus must be melted under a thin stratum of water:—a thermometer should then be plunged into the midst of the melted substance, and when the instrument stands at about 109°, it should be well agitated. The phosphorus then solidifies, and the temperature always rises to and remains at one uni-

or thirty degrees lower; and then
eat evolved during solidification,
be sufficient to make it regain the
g point. The degree at which
meter would remain stationary
end on that to which the phos-
l fallen before solidifying, and on
ion of heat to the surrounding
The greater the quantity of latent
by this medium, the less will re-
ise the temperature of the solid.
s has found as the result of his
ts, that the temperature at which
osphorus melts and becomes solid
ntigrade. This is already equal
, a temperature much higher than
has been hitherto assigned by
—*Comptes Rendus.*

ATION OF THE MELTING POINTS TY SUBSTANCES IN ORGANIC SIS.

et separation of many of the fats,
titative analysis of animal sub-
by no means an easy task. One
most important characteristics is
of fusion or solidification, which
o be tolerably constant in each.
be ascertained by taking a capillary
ly made over a spirit lamp): into
all quantity of the substance is
the mouth; the lower extremity
e is then sealed; if the fat is solid
y temperatures, it must be pre-
sed. The sealed end of the tube
mmersed in water, in which an
thermometer is placed, and the
re of the water must be either
lowered (by the addition of hot
the use of freezing mixtures, ac-
o whether the substance is to be
or liquefied) until that point is
at which the fat either solidifies or
he freezing points of the following
s were thus determined:—Choles-
°, Stearic acid 158°, Stearine 143°,
acid 140°, Margarine 118°. Oleic
nes solid below 32°,—Butyric acid
and Oleine at 24°.—*Dr. Griffiths*
ood.

ION OF SULPHURETS ON METALLIC IES STRUCK BY LIGHTNING.

is more common than to hear,
ons or buildings have been struck
ng, that there was a strong odour
r in and around the spot. This
s, however, been generally referred
al combustion of organic matter.
imponderable like the electric fluid
in, be combined with, or elicit
ther from the atmosphere *or by* that sulphur is actually evolved by the effect of a stroke of lightning.

On Sunday, June 14, 1846, a church near Chambery was struck by lightning. The interior was filled with a thick smoke, and the smell was compared to that of gunpowder. M. Boujean having been informed that certain gilt articles had been blackened by the electric fluid, examined the place the following day. He found that the gilt frame of a large picture was almost entirely blackened in its longitudinal and transverse portions. Six gilt chandeliers were blackened, exactly like copper immersed in sulphuretted hydrogen gas; while a cross, gilt exactly like the chandeliers, and placed in the midst of them, had not undergone any change. A portion of the dark film was scratched from one of the tarnished chandeliers, and digested in pure nitro-muriatic acid. The addition of a salt of barytes to the diluted solution indicated clearly the presence of sulphuric acid. It would thus appear that the electric fluid is accompanied with sulphur in some state of combination, probably as sulphuretted hydrogen. If it were sulphurous acid, oxidable metals would be transformed to sulphites and sulphates. The odour, therefore, so frequently observed, is probably due to the presence of the above mentioned gas.

It may be objected that gold is not chemically attacked by sulphureous vapours; but M. Bonjean contends that so far back as 1838, he proved that gold when exposed to the vapour of sulphureous waters, is liable to become tarnished and transformed in the course of fifteen or twenty days, to a sulphuret, like silver, lead, copper, &c. The only difference is that these metals, being much more oxidable, the reaction caused by sulphur becomes more speedily evident.—*Comptes Rendus.*

*** M. Bonjean's observation on this chemical effect of an electric stroke, is novel and interesting. We take leave to doubt, however, whether sulphur vapours, under any circumstances, will tarnish *pure* gold. Much of the gold sold for gilding is alloyed with copper, and we apprehend that we have, in the extensive use of this alloy, or in the use of Dutch leaf itself, a full explanation of this alleged action of sulphur on gold, in this and other instances. We have known *pure* gold to preserve its polish and brightness in a London atmosphere, where sulphur abounds, for seventeen years. The gold plates used by the Egyptians for covering the features of their mummies, and their mummy cases, is, if we except superficial dirt, as bright as when first laid down, 3,000 years ago.

FALSE REGISTRATION OF DEATHS.

Correspondents have frequently addressed us on the defective manner in which deaths are registered under the Registration Act, and the evidence given on various trials which have taken place of late years shows that the present mode of carrying out the act is exceedingly favourable to the perpetration of forgery and fraud. It would appear that there is nothing to prevent a man registering an account of his own death and obtaining a certificate for his own interment, and there seems to be no difficulty whatever in registering the death of a wife or husband, as the following case, which was tried last week at the Central Criminal Court, will show :—

Eliza Medland, *alias* Jane Palk, 40, was indicted for a misdemeanour in having unlawfully caused to be inserted in the register of deaths of St. Luke's, a false entry of a death.

It appeared from the evidence, that the defendant, who is well known to the Mendicity Society as a notorious begging-letter impostor, had applied to the Duke of Portland for relief, representing that her husband, John Palk, had just died, and that she was in great distress ; and his grace, believing her representation, gave his housekeeper, Mrs. Jones, directions to hand over three sovereigns to her. The housekeeper, it would appear, had some suspicion of the truth of the prisoner's story, and when she came for the money she required a certificate of the registry of the death ; and it would appear that the prisoner at once proceeded to the registrar and caused him to make an entry of the death of her pretended husband, giving the necessary particulars, which were of course false in every respect. The Jury found the prisoner *Guilty*.

Sergeant Brennan, in answer to a question from the Court, stated that the prisoner had been known for 10 years as a begging-letter impostor, and she had got her living during that period by means of fraud and false representation of this description. The Common Serjeant sentenced the prisoner to be kept to hard labour for one year.

Surely some remedy for this abuse is required. It might be rendered imperative that the registration should only be made upon the statements of *two* persons, one being a housekeeper, living in the neighbourhood,—or the constable of the parish.

OBITUARY.

MR. LANGSTAFF.

On the 13th inst. in New Basinghall-Street, George Langstaff, Esq. Mr. Langstaff has been for a long period we
to the profession. His collection
mens was one of the best and m
sive ever made by a private individ

EFFECTS UPON THE SYSTEM OF T
RATION OF PUTRID MATTER IN
ING OF THE CELLULAR MEMBR
SIR B. BRODIE.

Whenever putrid matter is pent
a slough of the cellular memb
system is poisoned by it. The sul
and carburetted hydrogen gas,
during the decomposition of dea
matter, seems to pass, in part at
the circulation, producing the m
gerous symptoms. Incisions, whi
the tension of the skin, allow these
gases to escape, and the relief w
affords to the patient is very remar
might, if it were necessary, enu
great number of cases in illust
what I have just observed. One,
will be sufficient. . . . . I was cal
few years since, to see a gentle
appeared to be actually on the point
His extremities were cold, his puls
perceptible. It was doubtful w
was sensible or not. He made,
roused, several imperfect atte
speak, but could say nothing in
Below the right hypochondrium th
considerable tumor, the skin being
red colour, on the verge of mort
On examination with the fingers, I
a sort of emphysematous crackling,
imperfect fluctuation. Having ma
incision, I discovered underneath
coloured skin what might be
quagmire of slough. A small qu
putrid matter escaped ; but ther
also such a quantity of noisome and
gas, apparently sulphuretted hydro
I could scarcely bear to remain in t
The stench pervaded the whole ho
even could be perceived in the gard
it. Within two minutes after
formance of this operation, so t
appearance, but so important in re
patient looked up and said, quite d
" What is it that you have done w
made so great a difference in my fe
At the same time the pulse return
wrist ; and from this moment he r
without any further unfavourable sy
After a few days, sloughs came aw
bably of muscle, cellular membr
peritoneum, in a confused mass,
them a gall-stone of moderate size ;
ing, to a certain extent at least, t
of the disease.—*Lectures illustr
various Subjects in Pathology and*

ectures.

OF LECTURES
ON
URISPRUDENCE,

S. Taylor, F.R.S.

Guy's Hospital.

URE VIII.

of skeletons.—Questions
respecting the iden-
on the frequent occur-
with human bones—iden-
by the teeth—the bones
ken for those of human
ignorance on this subject
distinctions between the
lia and those of man—
ents—use of the micro-
vestigations. Determi-
x in skeletons—difficult
puberty—general differ-
the male and female
iarities of the female
ination of the period of
nes—decomposition re-
produced in bones after
ng periods—presence of
ell—preservation of the
nation of age—the de-
e teeth in young subjects
of the first set—rules for
age by the teeth—also by
ssification in the body—
nes in the young, adult,

ure I have to point out to
ich require especial atten-
ation and examination of

se be obvious, that in all
osseous remains of a per-
he *identity* of the skeleton,
ed bones, should be most
orily made out. This can,
only by the aid of medical
less you are fully aware
ces to which you should
your attention, it may
hat some most essential
ooked. From the examina-
ted cases in which medical
equired on these occasions,
rcumstances to which in-
specially directed are the

bones are those of a human
animal. 2. If of a human
ey belonged to a male
ving thus far established

their identity as part of a human skeleton, some subordinate questions will arise respecting them. 3. The length of the period during which they have probably remained in the ground. 4. The probable age of the individual to whom they belonged. If the upper and lower jaws be found, we shall derive much assistance in solving this question by an examination of the teeth. 5. The probable stature of the individual when living. 6. The race to which he belonged: thus we must not confound the skeleton of the Caucasian with one of the Negro variety: for, from the mixed nature of our population, even this may become a very material question in relation to the guilt or innocence of an accused person. We are then bound to examine these bones for certain special characters, the observation of which may be necessary to throw a light upon the general evidence; while inattention to them at the time of examination may lead to the defeat of justice, and to the censure of the medical witness. 7. Thus it will be proper to determine whether solitary bones belong to the right or left side of the body, and whether they form parts of one, or of more than one skeleton. 8. Whether they have sustained any mechanical injury during life, *i. e.*, whether at any antecedent period they have or have not been fractured, and if a fracture has existed, whether this have occurred during life or by accident during the exhumation: if during life, whether it be recent or of old standing. 9. The presence or absenc of personal deformities, the presence or absence of supernumerary fingers or toes, of a curvature of the spine, of a curvature of the bones from mollities ossium, or of anchylosis of one or more joints. 10. Murderers sometimes attempt to make away with their victims by burning the bodies: it may be therefore proper to determine whether the bones have or have not undergone calcination. This especially applies to cases of infanticide; and sometimes but a very small portion of the fœtal skeleton can be procured for the formation of a medical opinion. Other points of circumstantial evidence also demand attention—the position of the bones when discovered in the ground, whether lying at full length or grouped together confusedly. In all bodies which have undergone Christian burial, the skeleton is found lying at full length, with its head to the west and feet to the east. By an attention to this point, the locality has been at once identified as the site of an ancient burial-ground, where bones have been discovered during excavations for the foundation of new buildings. This inference is confirmed when the bones of persons of all ages and of both sexes are found in or near the same spot*. It is not unusual to find human mixed with animal bones. I have procured from a deep grave in an old cemetery, the bones of the horse mixed with those of the male human skeleton. Occasionally, in ancient times, this animal was killed and buried with his deceased owner: and probably the disinterment of these bones, in old burial grounds, has given rise to the fables of giants. In one cemetery in the vicinity of London, the bones of the horse are very frequently found when the excavation is carried to a great depth. The bones of the ox have also been met with in graves mixed with human bones. We have here the upper part of the thigh bone of an ox, which was dug out of a deep grave in a country churchyard, and which was forwarded to me as an unusually developed femur of a human being.

---

* In very ancient times, the body was consigned to a stone chest in a sitting posture, with

Identity is sometimes strikingly made out by the presence or absence of the teeth, by their form, position, and the number that may be deficient. The examination of the teeth often aids considerably in the determination of the age of the person to whom the skeleton belonged.

It will thus be perceived that medical inquiries may take a very wide range on these occasions; and the importance of returning proper answers cannot be overrated.

Human and animal bones.—The greatest ignorance prevails among the public on this subject. The bones of horses, cows, dogs, and sheep, may be mistaken for those of human beings. In an antiquarian collection of relics obtained from a neighbouring Roman castrum, I saw, some years since, the tibia of a dog carefully labelled and religiously preserved as a bone of an ancient Roman. The same collection contained fragments of bones of various animals, carnivorous and herbivorous, all marked as *human relics;* and yet this collection belonged to a clergyman who had preferred adopting his own view of the nature of the relics, to taking the opinion of any one acquainted with anatomy. Even well-informed men may be easily mistaken on such subjects. Belzoni, the celebrated traveller, brought from Egypt, with his sarcophagi, a number of bones taken from the interior of the pyramids, which he pronounced to be the bones of King Cephrenes, or some of the Shepherd kings. Mr. Clift informed me, that by the request of a friend he went down to examine them after they had been submitted to public exhibition, and he found that they were nothing more than the bones of oxen. The osseous relics of saints, as they are collected and preserved in glass and crystal cases in Roman Catholic countries, often present anomalies which would surprise an anatomist. Supernumerary ribs and vertebræ are occasionally found, and intermixed with them are to be seen bones which certainly never appertained to a human being. I mention these facts because they shew the importance of entrusting the examination of bones, in all judicial inquiries, to well-educated medical men. The lower classes of society are ever ready to suspect murder when bones are exhumed; and it will not always be easy to satisfy them that the exhumed bones could not have belonged to a human being.

The lamentable effects of this ignorance were displayed in a case which occurred at Damascus in 1840, and which at the time excited considerable attention. A Roman Catholic priest, with his son, suddenly disappeared in the early part of that year, and a very strong suspicion arose that they had been murdered. Certain Jews were charged with having murdered the father and son for horrible purposes. The sewer in the quarter of the town in which they lived, was examined, and some bones were there found. These were pronounced by the persons who discovered them, to be human bones; and the discovery was considered to confirm the suspicion which had arisen. Several of the accused parties died under the tortures to which they were subjected. It seems that the state of anatomy was so low in Syria, that there was no one competent to solve the question whether these were really animal or human bones. Some persons who inspected them, pronounced that they must have been lying in the sewer for a great length of time, and that they had belonged to an animal. A proposition was then made that the bones should be packed in a box and forwarded to the Parisian Academy of Medicine, for their decision. I believe it was subsequently clearly proved that they were animal remains. Such a case is not likely to occur in England, for there are few professional men who would not be at once able to pronounce an opinion even from the examination of a fragment.

It will be, in most cases, easier to say whether a particular bone has formed part of a human skeleton or not, than to determine to what animal it may have belonged; and that is commonly all that is expected from a medical witness. A moderate acquaintance with osteology will enable him to give an affirmative or negative opinion: but where part only of the shaft of a bone—as of the humerus, radius, tibia, or fibula—is produced, some caution is required in forming a judgment. In the anatomical lectures, all the peculiarities of human bones have been fully explained to you. It will, therefore, be necessary, in this place, to offer only a few remarks on certain well-marked

---

the arms clasped about the knees. Thus, in these graves, the skeleton has been discovered with the thigh-bones folded on the chest.

differences which are observed to exist between the bones of man and animals.

With respect to the *skull*, the foramen magnum in all animals, except the ape tribe, is placed very far back, and has its posterior edge turned upwards. In the ape tribe, and especially in the ourang-outang, it is nearer to the centre of the base of the cranium than in any other animal, and is more nearly on a level with the plane of the base of the skull. All animals, including the orang-outang and ape tribe, have two bones in the face, in addition to those found in man. These are situated between the superior maxillary bones, and are called ossa intermaxillaria, or, from their holding the incisor teeth, the ossa incisoria. The suture which separates them from the maxillary bones becomes obliterated in some of these animals at an early period; but still traces of it may be plainly seen. To speak of the facial angle as a mark of distinction is quite unnecessary; a medical opinion can never be required except in those cases where only one bone, or the fragment of a bone, is presented for examination. The lower jaw in animals is destitute of a protuberance corresponding to the chin; it is also longer, in proportion to the cranium. The condyles vary in shape according to the nature of the food.

The trunk calls for no particular remark. The *vertebræ* are strikingly distinguished by their form, and by the direction of their spinous and transverse processes. Their bodies are longer, and deeply grooved laterally, in a vertical direction. The sacrum is generally narrower in proportion than in man; it is wide in those animals which occasionally stand erect, as in the ape and the bear, but it is in these animals longer. The pelvis is in all cases much elongated, is narrower, and has less of a basin-like appearance; the level of the brim having a much greater obliquity than in man. The *thorax* of animals without clavicles is commonly compressed at the sides, so as to render it much deeper from the sternum to the spine. This is especially observed in the dog, cat, bear, and in long-legged animals. The ribs, or fragments of ribs, might perhaps be occasionally confounded. Most mammalia possess more ribs than are ound in man; the number correspondng to that of the dorsal vertebræ. The ibs vary much in form, but in herbivorous animals they are generally broad nd thick; in the bear and dog they are more rounded. The sternum of the ourang-utang somewhat resembles that of man; it is flat but narrowed, and the division of s pieces is more apparent: in all other animals it differs in being considerably narrower, more or less of a rounded form, nd in being evidently composed *of many* moveable pieces. Most quadrupeds want clavicles: they exist in the ape tribe, and very much resemble those of man, so that the clavicle of the ape might be easily mistaken for that of a young child: in the dog and cat, there is a clavicular bone suspended in the muscles. The scapula of animals including the ourang-outang and ape, is much longer in proportion, and is more equally divided by the spine; the fossa infra-spinalis being much smaller in proportion than in man. The *os humeri* of animals is observed to become short as the metacarpus is elongated: in the ape tribe, it very closely resembles that of man. In apes the bones of the fore-arm have the same general appearance as in man; but the two bones are long and slender, and the radius is as long as the ulna. In all carnivorous animals the olecranon is extended farther back, and is more irregular than in man. The carpus in apes has one bone more than in man. The size and strength of the thumb are much greater in man than in any animal. Even in the ape-tribe, although separate and opposed to the other fingers, it is very small and much shorter than in the human species. The *os femoris* in most quadrupeds is so short that it scarcely projects beyond the abdomen: it varies in length according to that of the metatarsus. The neck of the thigh-bone is remarkably short, but the great trochanter rises considerably above the head of the bone even in the ape tribe. In some animals, as in the horse, the trochanter ends in an unciform process projecting above the head of the bone. In the ourang-outang, the os femoris is straighter than in man. In the bear it closely resembles the human femur. The bones of the leg are nearly as in man, but the *tibia* is in general considerably longer than the os femoris. In the bear it preserves a proper proportion. In the ape tribe, these bones are nearly of equal length. In the dog the fibula is placed behind the tibia, and is attached to it in its lower half. In the horse, the fibula forms merely a kind of splinter anchylosed by age to the upper part of the tibia. In the ruminantia the fibula is wanting: in the pig it is anchylosed to the tibia throughout its whole length. In apes, while the great toe is shorter than the rest, the smaller toes are much longer than in man. In none of the mammalia, except man, does the foot rest completely on the ground. The os calcis generally wants the tuberosity of the heel; but this exists in the ape tribe, although to a less extent than in man.

Such are the most prominent differences usually assigned by anatomists to the bones of animals. It is not improbable, however, that before long some assistance will be derived from the use of the microscope. This instrument may be especially serviceable in those cases of difficulty in which an opinion may be required from only minute fragments of bone. The Haversian canals and bone-cells exist in all classes of animals which have an osseous system; and it has been lately shown that the bone-cells differ in size in the four great classes of animals. They are smallest in birds, and largest in reptiles: in the mammalia they occupy an intermediate position. In fish they are entirely different in appearance from those existing in the other three classes. These bone-cells are said to be of the same size in the same class: thus, in the mammalia, they are no larger in the bones of the horse than they are in those of the mouse. In human bone, the cells are sometimes almost triangular in outline, at other times they have more of a linear or elongated shape. Their number is in an inverse proportion to the Haversian canals in bone. It is desirable that further observations should be made on this subject, and that differences in the microscopical structure of bone should be sought for in the human subject, and in the various orders of mammalia. It has happened on several occasions of late years, in cases of infanticide, that great difficulty has been experienced in identifying small portions of bone when the skeleton has been found partially consumed.

When it has been clearly proved that the bones are not those of a human being, the inquiry is at an end.

Determination of sex in skeletons.—The determination of the sex from an examination of the skeleton or certain detached bones can only be readily made in subjects which have passed the age of puberty; for sexual differences in the skeletons are scarcely apparent until adult age has been reached. I have, however, seen the well-marked sexual differences of the pelvis in the skeleton of a boy of eleven. The skeleton of the female is smaller and more slender than that of the male. The full-grown bone of a female is distinguished from that of a male, by its ridges, depressions, and processes being less marked,—the shaft is smoother and more polished, while the articular surfaces are flatter. The skull of the female is more contracted in front, and forms a longer oval from before backwards. The thorax, which is naturally shorter, smaller, and less prominent than in the male, is somewhat wider about the fourth rib: it then contracts somewhat below, so that while the general shape of the chest approaches to an oval in the female, it is conical in the male skeleton. The form of this cavity is often flattened laterally to a considerable extent, owing to the mode of dress adopted by females. This altered condition of the ribs may then become a means of identity. The sternum is shorter, terminating opposite the fourth pair of ribs, but its upper portion is larger than in the male; in the latter it terminates opposite the fifth pair of ribs. The ribs are shorter, more slender, and less arched, and take a more horizontal course in the female: their upper and lower borders are sharper. The false ribs are proportionately larger; and the cartilaginous portions of the true ribs are longer than in the male. The shoulders are lower, and the scapulo-humeral articulations nearer to each other. The clavicles are more slender, round, and pass in a more straight direction to join the acromion processes. In the male they have more the form of the italic *S*, are flatter, larger, and run more directly backwards. The female scapula is thinner, smaller, flatter, and has sharper angles than that of the male. The bodies of the vertebræ are smaller, the hole for the spinal marrow and the foramina larger; and the lumbar vertebræ have greater length than in the male.

The upper extremities are shorter, the carpus smaller, and the metacarpus and phalanges are more slender in the female. The thigh bones have a greater curvature forwards above, and are turned more obliquely inwards below. The neck of the thigh-bone in the female forms nearly a right angle with the shaft, whereby the trochanter major is brought more nearly on a level with the head of the bone. In the male the neck of the femur is inclined obliquely upwards, and the trochanter major is below the level of the head. In the female the internal condyles are larger. The bones of the leg are more slender, and those of the feet are smaller than in the male.

The most remarkable difference is observed in the pelvis, and it is by an examination of this portion of the adult skeleton that the identity may be most satisfactorily made out. In the female the ossa ilii are flatter and more everted, giving to the whole pelvis a greater capacity; the os sacrum broader, and turned more backwards; the os coccygis more slender, moveable, and turned more backwards, the space between the ossa pubis larger, and the cartilage of the symphysis broader. The angle formed by the rami of the ossa pubis with the symphysis is larger. In a well-formed male skeleton I have found the angle to be 73°, while in a well-formed female skeleton the angle was equal to 90°. The tuberosities of the ossa ischii are flatter, and at a greater distance from each other. The brim of the pelvis is wider and of an oval form, corresponding with the head of a child, and the longest diameter extending between the ilia, or transversely. In the male the brim is more circular, and the greatest diameter is between the pelvis and sacrum. The foramina ovalia in the female are wider, and approach more to a triangular form than in the male, one sharp angle being at the junction of the pelvis with the ischium: the acetabula are farther distant from each other. The pelvis of the female loses some of its well-marked sexual characters in advanced life.

It will be understood that these differences are for the most part relative, and some are so slight that they can scarcely be regarded as characteristic of the sexes. Great difficulty in forming an opinion will exist in those cases where only a fragment of a bone can be procured; but a medical witness is not expected to work out impossibilities: if he has a sufficient portion of a skeleton before him he may be able to determine the sex, otherwise it would be advisable to state that it was impossible to answer the question, and that the bone or a fragment might have belonged either to a male or a female.

Period of interment.—One of the first questions asked on the disinterment of bones, relates to the length of the period during which they may have remained buried in the ground. The period at which the bones begin to undergo decomposition will depend upon that at which the soft parts have entirely disappeared. The common opinion is, that the soft parts are destroyed in ordinary graves in from seven to ten years. Bernt, however, mentions a case seen by Navier, in which some fleshy parts of the body remained after an interment of twenty-one years. The changes in the bones are observed to commence by the loss of animal matter, so that they become lighter; externally they acquire a dark incrustation when in contact with the earth. We have here an instance of this in a humerus exhumed after probably seventy years' interment; and here another instance of several of the long bones of apparently a young female, which have been probably buried for 800 or 900 years. In the first the dark incrustation is confined to the surface; but in these very ancient bones, the osseous shell is of a dark brown colour throughout, like oak. Under peculiar circumstances the soft parts of the body may remain free from decomposition for a much longer period. Thus the body of the celebrated Prince Menschikoff, who was exiled by Peter the Great to Beresov in Siberia, and who died there in 1729, was exhumed in 1821; and although it had been lying ninety-two years in the grave, it was found in a state of perfect preservation. This was undoubtedly due to the intense cold which uniformly prevails in that region at a slight depth below the surface of the soil. The animal matter is never entirely lost; it exists in bones which have been buried for many centuries, and may be made evident by digesting them in muriatic acid. The shaft of the bone becomes, after long burial, very brittle; it may be easily broken, and cut or scraped with a knife. A fragment of this ancient bone is, as you will perceive, dissolved with effervescence by muriatic acid. Ammonia gives a very abundant whitish precipitate of a gelatinous character (phosphate of lime). Ferrocyanide of potassium throws down a precipitate, consisting in part of animal matter and in part of Prussian blue, thereby indicating the presence of a large quantity of iron. It appears to me to be impossible to assign with any approach to precision the period required for the production of these changes; they vary with the age of the subject, taking place more rapidly in the skeletons of the young: they vary also with the nature of the soil in which the bones are buried, according to whether this be dry or humid, sandy, cretaceous, or argillaceous. Some have alleged that the bones of a person buried in an ordinary coffin are entirely destroyed, with the exception of the skull and thigh bones, within a period of thirty years; but I have seen a very perfect skeleton of an individual who had been buried thirty-four years. We have here the lower jaw, which is quite hard and firm; and I have just referred to instances of bones which had most probably been buried for eight or nine centuries. These, it is true, were found in a stone coffin, but there are many cases on record where the skull and long bones have been found quite perfect after a much longer period than thirty years. In general, the lower jaw of adults is preserved for a great length of time, and with it the teeth, which from their enamel resist decomposition longer than any other parts of the body. The ultimate destruction of the bone is effected by the complete disintegration of its earthy parts, the phosphate and carbonate of lime falling into and mixing with the earth around. The large proportion of these earthy materials (67 per cent.) is the cause of the great indestructibility of bone.

On the discovery of one or more bones, the question may be: Can it have been buried for a longer period than fifteen or twenty years? Suspicion may arise that it was the bone of a person alleged to have been murdered, and who was known to have disappeared about that period. In some cases this question might admit of a ready answer. If it were the long-bone of an adult, and it was found to be light, friable, brittle, and easily scraped to powder, the probability is that it had been interred for a much longer period than that supposed. We can only form a rough opinion of the period of interment of bones by the presence or absence of soft parts; of marrow in the interior; by the firmness and weight, or brittleness dryness, and lightness of the bone. Even these remarks can scarcely be made applicable to bones preserved in durable coffins; for in this state they are removed to a great extent from all the common causes of chemical change. Devergie states that the bones of King Dagobert were found in a tolerably perfect state at Saint Denis, although they had been buried twelve hundred years.

It is a question which yet remains to be determined, whether, as it is stated to be the case with the fossil remains of animals, human bones after long interment may not contain a larger proportion of fluoride of calcium than when recent. It has been ascertained that the ancient bones of extinct animals contain a very large proportion of the fluoride, while in recent bones the proportion is so small that it requires a large quantity of bone to determine its presence.

It need hardly be observed, that these medico-legal questions only arise in those cases where the bones have been found in an unusual locality, as in the cellar of a house or in a garden: and it will always be proper to make further exploration to see whether the bones of different persons may not be found lying near.

Determination of age in skeletons.—In regard to young subjects the age is best determined by an examination of the jaws and teeth, although the skeleton of the young is characterised by the smallness of the bones. If the jaw of a child can be found, medical evidence may be given of its probable age. In a case of alleged infanticide, which occurred in France, there were found among the exhumed bones of two children parts of the jaws, containing the rudiments of the molar teeth, which appear about the eighth or ninth month of pregnancy. This fact showed, what was rather important to the inquiry, that the child to whom the jaw belonged must have been born at or about the full period.

It may be alleged that the bones are those of a child which has been murdered; but the medical witness may be able to prove from an examination of the jaws, that the bones must have belonged to a child older or younger than that which is missing. There are numerous other cases in which a question of this kind may become important.

The determination of the age by an examination of the bones in young subjects, is by no means so satisfactory as by the observation of the *teeth*.

The alveoli are said to be formed about the sixth month of uterine life. At birth the rudiments of the whole of the temporary *teeth*, and of the anterior permanent molars, *are formed in capsules* within the gum; and about this period, the fangs of the incisors begin to appear. Great difference of opinion exists respecting the time at which the *temporary teeth* begin to rise above the gums in the child after birth. According to Mr. Bell, these teeth appear in the following order:—The four central incisors in from *five to eigh months;* the four lateral incisors in from *seven to ten months;* the four anterior molars in from *twelve to sixteen months;* the four cuspidati in from *fourteen to twenty months;* and the four posterior molars in from *eighteen months to three years.* The temporary are known from the corresponding permanent teeth by their much smaller size, by the absence of bicuspides, by the fact that the fangs diverge at a greater angle from the molars; and there is another and remarkable point of difference, according to Mr. Saunders, namely, that the enamel at the neck is collected into a kind of ridge, instead of terminating, as in the permanent set, evenly on the fang. This is especially apparent in the incisors and cuspidati, but, as Mr. Saunders has remarked, it applies to all the temporary teeth. Between six and seven years of age, the jaws contain forty-eight teeth—twenty of the temporary set in a perfect state, and twenty-eight of the permanent set more or less developed, and placed behind the temporary teeth which they are to replace. According to Mr. Saunders, the order in which the permanent teeth appear is as follows:—At *seven* years of age, the four anterior molars; at *eight* years, the four central incisors; at *nine* years, the four lateral incisors; at *ten*, the four anterior bicuspides; at *eleven*, the four posterior bicuspides; at from *twelve to twelve and a half* years, the four cuspidati; and at from *twelve and a half to fourteen* years, the four posterior molars: thus making the total number of teeth in the jaw at this period twenty-eight. The dentes sapientiæ seldom make their appearance before the age of eighteen, and often not until a much later period in life. In general, the teeth of the lower jaw make their appearance before those of the upper. Some irregularities may occur in the periods at which the teeth appear; but according to numerous observations made by Mr. Saunders and others, the description just given is applicable to a large majority of cases, and is sufficiently correct for practical purposes.

In addition to the examination of the teeth, medical jurists are accustomed to rely upon the progress of ossification in the skeleton as furnishing evidence of age in the early periods of life. At *one year*, ossification commences in the lower extremities of the humerus and ulna, in the heads of the femur and humerus, and in the upper cartilage of the tibia. At *two years*, ossification takes place in the lower cartilage of the radius, and in the tibia and fibula. At *two years and a half*, it takes place in the greater tuberosity of the head of the humerus, in the patella, and in the lower ends of the four last metacarpal bones; at *three years*, in the trochanter; at *four years*, in the second and third cuneiform bones of the tarsus; at *four and a half years*, in the small tuberosity of the head of the humerus, and the upper cartilage of the fibula; at *six years*, the descending ramus of the pubis meets the ascending ramus of the ischium. At from *eight to nine years*, the upper cartilage of the radius becomes ossified. At *nine years*, the ilium, ischium, and pubis, meet in the cotyloid cavity to form the pelvis. At *ten years*, ossification begins in the cartilaginous end of the olecranon; at *twelve*, in the os pisiforme of the carpus; at *thirteen*, the three portions of the ossa innominata still admit of separation into ilium, ischium, and pubis, although nearly united; the neck of the femur is ossified. At *fifteen*, the coracoid process becomes united to the scapula; and *between fifteen and sixteen*, the olecranon to the ulna. From *eighteen to twenty*, the epiphysis at the upper end of the femur becomes joined to the body of the bone, as well as those belonging to the metacarpus, metatarsus, and phalanges. At *twenty*, there is a small epiphysis at the sternal end of the clavicle; the upper and lower epiphyses of the fibula, as well as the lower epiphysis of the femur, are respectively united to the bones. At *twenty-five years*, the epiphyses of the sternal end of the clavicle, and of the crista ilii, become united to the bones. This account of the progress of ossification may be taken as a representation of average results.

In the cavity of the skull of young subjects the convolutions of the brain are commonly very strongly marked on the bones.

When ossification is once completed, it is very difficult to determine the age by the examination of bones. That the individual has reached *adult age*, will be indicated by the union of all the epiphyses to the bones, by the great firmness and solidity of the bones, with their rough surfaces for the motion of muscles, their well-marked processes, grooves, and foramina. In the jaws, we may expect to find the dentes sapientiæ, and the other teeth will probably be found much worn, although this last sign is not of any great importance. The lower jaw forms a great angle, being somewhat of an elliptical form, and is strongly contrasted with the semicircular shape of the jaw at an early period of life; the sutures are also closed, and may be found in some instances nearly obliterated.

The bones of an old person are generally lighter than those of an *adult of the same size*, the *medullary cavities of the long bones* being larger. The bones lose that ivory-looking character which they have in adults, become yellow from the quantity of oil which they contain, more earthy, and brittle. Those parts of the skeleton which are cartilaginous in adults are commonly more or less ossified in old age. The bones of the cranium are thinner; the sutures entirely disappear, first on the inside, and then on the outside of the skull. The teeth have either dropped out, or the crowns are worn away to the sockets. Sometimes no trace of alveolar cavities is to be seen, the lower jaw being a mere rounded bone, with a smooth surface on every side.

CASE WHERE A FOREIGN BODY ENTERED THE TRACHEA FROM WITHOUT.

One of the most remarkable instances of a foreign body getting into the windpipe without passing through the rima glottidis, is mentioned by De la Martinière (Mém. de l'Acad. de Chir., vol. v. p. 521). A child, nine or ten years of age, amusing himself with cracking a small whip, was suddenly seized with extreme difficulty of breathing, and soon exhibited all the symptoms of approaching suffocation. He complained, by gesture, of some impediment in the trachea. The surgeons who saw him, aware that he had never been left alone, and that he could not have put any thing into his mouth, did not suspect the existence of a foreign body impeding respiration. He was bled, the throat examined, and an œsophageal bougie passed, without making any discovery. The symptoms became more urgent, and De la Martinière saw him an hour after. "On examining the neck, externally, I found," says he, "a small red spot on its fore part, like the middle of a flea bite, immediately below the cricoid cartilage, and beneath it was felt deeply a little circumscribed ganglion as large as a lentil, corresponding to the red spot, and of unnatural brightness; the sensation could not have been more distinct through the thickness of the parts. I at once determined to cut through the skin and fat upon this spot. The finger having been introduced into the wound, and touching the tubercle, which was close to the wind-rings of that tube, I felt with my nail an irregularity, projecting at least a line above its convexity, and endeavoured in vain to seize it with the dressing forceps. Luckily I had with me a pair of hair nippers, and with these caught hold of the body, which I drew out, and, to my great surprise, found it to be a large copper pin without a head, about an inch and a quarter long, which had pierced through the wind-pipe from left to right." The child got well in a few days.—South's Translation of *Chelius*, part xii.

Original Communications.

OBSERVATIONS ON

A CASE IN WHICH ENORMOUS ENLARGEMENT OF THE SPLEEN AND LIVER,

TOGETHER WITH DILATATION OF ALL THE VESSELS OF THE BODY, WAS FOUND COINCIDENT WITH A PECULIARLY ALTERED CONDITION OF THE BLOOD.

By H. W. Fuller, M.B. and L.M. Cantab.

Thomas Windsor, a labouring man, 22 years of age, was admitted into St. George's Hospital on the 31st day of December, 1845, under the care of Dr. Nairne. He stated that he had enjoyed very excellent health up to May last, at which date he began to suffer from dyspepsia, and to feel altogether languid and uncomfortable. After some little time his attention was drawn to a small hard tumor, situated just below the ribs on the left side: it was not painful on pressure, and as he did not at this time refer any of his symptoms to its presence, he only took a little purgative medicine, and continued as usual at his work.

For about three months there was little perceptible increase in the size of this tumor, but his dyspeptic symptoms became much more severe, his bowels at the same time unusually costive, and he found himself exceedingly languid and uneasy. Nevertheless, he continued at his work, taking a little aperient medicine from time to time, without having recourse to medical advice.

About the beginning of August the tumor began to increase rapidly in size, and from time to time he suffered from pain in its immediate vicinity; pain which was aggravated by active exercise, and occasionally shot, under such circumstances, up to his left shoulder. He could no longer obtain refreshing sleep; his dyspeptic symptoms continued with increased severity, and were now accompanied by loss of appetite, nausea, and occasional vomiting; he became subject to obstinate attacks of epistaxis, and got gradually thinner and weaker.

By the middle of October he was so much worse, the pain so much more severe and augmented on the slightest exertion, that he was obliged to take to his bed: still he did not have recourse to medical advice.

In this way he lingered on, getting gradually weaker and weaker, the abdomen at the same time enlarging, till towards the middle of December, when diarrhœa ensued, in addition to the previous symptoms: the pain became more constant and severe, and he was induced to apply to the hospital.

On admission, he was exceedingly weak and emaciated; his complexion of a dusky, yellowish hue; his countenance expressive of much distress and anxiety. He complained of a weight and fulness, attended by constant pain or uneasiness, on the left side of the abdomen, more particularly in the left iliac region. This pain, which extended when severe up to the left shoulder, was worse after eating, increased by firm, continued pressure, and by coughing, and invariably aggravated by the act of turning in bed. He could not lie on his right side, nor could he bear the slightest percussion at the seat of pain.

On examination the abdomen was found to be enormously enlarged; the superficial veins gorged and distended. There was considerable tympanitis, but slight fluctuation was also perceptible. A large hard tumor occupied the whole of the left side of the abdomen. Inferiorly this tumor extended into the left iliac fossa; its anterior margin could be traced upwards through the left portion of the epigastric region, in which situation it was exceedingly sharp and prominent, into the left hypochondrium, where it was lost under the ribs, the left side of the chest being perfectly dull on percussion as high as the nipple. Posteriorly it could be distinctly felt passing in front of the lumbar muscles. Its surface appeared to be uniformly smooth: its anterior margin somewhat fissured.

In answer to a question he stated, that he had lived in Chelsea all his life[*], in the enjoyment of excellent p to the date of the first coment of dyspepsia, which was k weeks, or two months, before perceived the tumor; that, to of his knowledge, he had never ced any symptom of interfever, and that he was not f having ever suffered from aorrhage, with the exception of t.

---

[*] I would observe in reference to the influence of malaria in this case, that although Chelsea is not generally supposed to be an unhealthy district, almost all the cases of ague admitted into St. George's Hospital occur in the persons of residents in and about Chelsea and Pimlico.

neral symptoms were wanderns in the limbs, headache, s and vertigo on assuming an sture; inability to sleep, total ppetite, nausea, and occasional g; excessive thirst, and diarabout a fortnight's duration. ion to these he had a slight cough, and a sense of conacross the chest. His gums pngy, but seldom bled; his harsh and unperspiring; his s quick and excessively weak; ue red at the tip and edges, rn, and loaded in the centre. e unfortunately was not exa-

rd poultices were applied to of pain; a starch injection inistered, and a draught, conʒss. of aromatic confection, o be taken three times a day; a short time, castor oil was to relieve the bowels, and ntly a pill, consisting of caloammony, and colocynth, was d for the same purpose. His sisted chiefly of strong beefad and milk, and wine: but all generally rejected very shortly ras taken.

xis constantly recurred; he got and weaker, and died on the nuary, 1846.

ollowing is the result of the tem examination performed ix hours after death:—

was a small quantity of rather rum in the cavity of the peri-

The whole of the left side of men was occupied by an enorenlarged spleen,* reaching diaphragm, which on the left pushed up and encroached chest, to the left iliac fossa. th the spleen measured 14 in circumference, at its broadwhich was towards the iliac fossa, 26 inches; and it weighed 5½ pounds. Its capsule was opaque, and very much thickened, more particularly at the lower part, where it was semicartilaginous in appearance, and about two lines in thickness. When cut into, this organ presented a variegated surface, being in many parts of a yellowish grey, in others of a deep brown red, in others of a pale brick colour: throughout, however, it was very firm in texture, and to the naked eye presented no actual change of structure. The splenic veins and arteries were greatly enlarged, and it was found that all the veins constituting the portal system were enormously dilated, and distended with semi-coagulated blood, of the consistence of that substance which may be squeezed out of a soft pulpy spleen, but of a peculiarly greyish purple colour. Some of the omental veins were so dilated as to equal the femoral in size, and their coats were remarkably thin. Further examination proved that all the vessels contained in the abdomen were greatly dilated, and filled with this same grumous blood.

The liver was also very much enlarged, reaching down to the crista ilii on the right side, and stretching across almost into the left hypochondrium, where it adhered to the omentum, which was tucked up in that situation. It presented what is called venous hepatic congestion of the second degree. To the eye there appeared to be no alteration of structure.

The kidneys were large and flabby, but apparently not diseased.

The caput coli and ascending colon were very much thickened, and the mucous membrane, which was of a very dark colour, was covered with numerous minute points of ulceration. The other parts of the intestinal canal were healthy. The mesenteric glands in the neighbourhood of the large intestine were considerably enlarged.

The lungs were firmly adherent at the back part by old and firm adhesions: they were soft in structure, and loaded with red frothy serum posteriorly, but apparently were healthy in structure.

The pericardium was healthy; the heart flabby and enlarged, but free

---

on of this spleen has been preserved belonging to St. George's Hos-from valvular disease. Its cavities, more especially those on the right side, were much dilated: both right and left were filled with blood resembling that found in other parts of the body. Several of the vessels of the extremities were examined; and both arteries and veins were found greatly dilated, and distended with blood of the same character.

By the aid of the microscope still further changes were detected. Three times during life, and again after death, I examined his blood under the microscope. During life the blood was twice obtained by pricking his finger with a needle, and the third time it was examined after the occurrence of epistaxis: after death it was taken from the splenic and portal veins, the heart, and the vessels of the extremities. During life and after death it in every instance presented the same appearance. In addition to the natural blood-corpuscles there were found to be a number of abnormal globules, of a spherical form, finely granular in appearance, colourless, and apparently possessed of no investing membrane and no nuclei. These globules varied greatly in size; some were about the size of ordinary blood-corpuscles, but the greater number of them were much larger,—some of the largest that I measured varying from $\frac{1}{1500}$ to $\frac{1}{3000}$ of an inch in diameter, the blood-globules in their immediate vicinity having a diameter of $\frac{1}{3500}$ of an inch. They were so numerous as to constitute about one-fourth, or even a larger portion, of the entire globules of the blood. They greatly resembled those finely granular globules, which from their frequent presence at any seat of irritation, are usually known, I believe, under the name of compound inflammation globules.

There did not appear to be any interstitial deposit in the liver, but the hepatic cells were manifestly unhealthy, presenting an indistinct, puffy appearance. I could not detect any interstitial deposit, or anything worthy of notice in the spleen.

Now many most interesting reflections are suggested by the case above detailed. What was the nature of this disease? Was it connected with malarious *influence?* What was the cause, and *what the* nature, of the local enlargements? Did the granular globules in the blood result from local action? and is the disease in its nature curable?

Did the disease essentially consist in the production and subsequent mechanical accumulation of these granular globules, or were they merely one of a series of changes, occurring in the system, in consequence of some general interfering cause?

To me, I confess, this last appears the more rational and satisfactory supposition. For the freedom of the capillary circulation in the spleen forbids the idea of stagnation occurring from such a cause; and if there had been such a lengthened interference with the circulation, as is implied by such a suggestion, effusion to a large extent should have taken place into the cavity of the peritoneum, as a relief to such an unnatural condition. Yet no such effect was found to follow, and we cannot fail to conclude, therefore, that the cause suggested is irreconcileable with the actual symptoms.

But, on the other hand, on looking to the history of the case, we find languor, depression, and symptoms of dyspepsia, its leading features throughout; and further, we perceive that these constitutional symptoms apparently preceded any local mischief, and were followed, after no long time, by unequivocal signs of general malnutrition. The skin became harsh, dry, and unperspiring; various organs took on unhealthy action; the blood became greatly altered in character; and emaciation gradually and steadily proceeded; and after death, not only did the liver and spleen present unmistakeable evidence of perverted nutrition, but the whole vascular system throughout the body was found to be equally affected. And thus we are led to the unavoidable conclusion, that some peculiar form or modification of primary and secondary mal-assimilation, the imperfect or perverted performance of the nutritive functions, was in itself the actual disease.

But was this perverted nutritive action induced by the action of malaria? did it ensue as a sequel to such influence, or was it set up independently of it?

We have evidence enough that where malaria acts in the usual manner, it produces no such immediate consequences as those above described; the constitutional symptoms, though certainly characterised by languor and depression, are yet obviously different in their nature; and, by microscopical examination, I have fully convinced myself that the blood of persons recently affected with ague undergoes no such change as that I have described. But further, I have sufficient proof, I think, to show that, for a considerable time, at least, no such alterations ensue. For, through the obliging kindness of Mr. Charles Miller, of Great Wakering, Essex, I have been enabled to examine the blood of a child in whom ague had run an unchecked course for nearly two years, giving rise to some little engorgement of the spleen; and in its microscopical characters I found it equally free from abnormal change.

It remains, therefore, only to ascertain whether, under certain peculiar circumstances, or whether under certain conditions of constitution, or in a still later stage of the disease, when confirmed ague cake has been formed, and the symptoms take on a fatal character, this unhealthy condition of blood is induced; as if it be not under such circumstances, it can hardly be conceived possible for cases of enlarged spleen such as I have described to be connected with malarious influence. But if, on the contrary, in the later stages of the disease, we should obtain evidence of the production of such changes, it would go far to identify the two cases, and we should then, I think, be warranted in inferring, that in the case I have detailed the morbid condition of the nutritive functions was induced by the pernicious influence of malaria, acting not openly in the production of ague, but slowly and insidiously in undermining the constitution, giving rise to that form of malnutrition manifested in great measure by the symptoms during life, but more fully evidenced by the altered character of the circulating fluid, and by the morbid condition of various parts of the body, as revealed by post-mortem investigation: And that further inquiry will prove this to be the case I am, in my own mind, fully convinced; for not only have almost all the cases on record of enlarged and indurated spleen been in some manner subjected to paludal exhalations, but all writers on the diseases of tropical climates where such diseases especially abound, agree in declaring that such enlargements are the most frequent attendants on the cachexia induced by exposure to such emanations[*].

The cause and nature of these local enlargements are questions which, in our present imperfect state of knowledge, admit but of a very unsatisfactory solution; indeed, we are able to do little more than point out their independence of certain commonly alleged causes. It is clear, from the reasons already stated, that mechanical obstruction affords not the slightest clue to such enlargements of the spleen; and it is equally clear, I think, that inflammatory action does not, as commonly asserted, afford any more satisfactory explanation. For though it is certain that such enlargements frequently occur as a sequel to the influence of malarious exhalations, they are commonly unconnected, for the first few weeks or months of their existence, with any appreciable pain, and unaccompanied by any constitutional symptom of inflammatory action. And although, in the more advanced stages of the disease, inflammation of an acute or chronic nature very generally supervenes, and there gives rise to local pain, it is obviously an effect, and not the cause, of local enlargement; it arises subsequently to the morbid action in the system, and affords, therefore, not the slightest explanation of the local changes which had occurred prior to its commencement.

On referring to various works on the subject, I find this opinion has frequently been expressed, and by M. Andral among others; and Mr. Twining, who, from the position he held at the hospital at Calcutta, had great opportunities of studying the various modifications of spleen disease, distinctly states[†], that the form of disease now under consideration is, in the greater number of cases, unconnected with local inflammation: and he further states, what I think a careful study of the disease must surely convince us of, "that instead of viewing the enlargement of the spleen as the principal object for investigation, it will be consistent with a correct view of the disease to speak of the enlargement of the spleen as one of the phenomena usually attendant on a peculiar description of constitutional disorder[‡]." And thus an inquiry into the cause of the local enlargement resolves itself into a question, as to the cause and nature of the constitutional derangement.

---

[*] Vide Twining on Diseases of Bengal, p. 279.

[†] Ib. p. 277.

[‡] Ib. p. 271.

Another question in reference to the case above quoted is, as to how the granular globules in the blood were generated;—as to whether they were produced by local action, or resulted from perversion of the process of sanguification. Now, as there had been no evidence of local mischief before general symptoms of malnutrition had begun to manifest themselves, and as one can hardly conceive it possible for such globules to have arisen from local action, without the production of local symptoms, the latter appears the more rational conclusion. On the other hand, their strong resemblance to those finely granular globules found so generally wherever irritation exists, found so constantly and in such large quantities in the sputa of phthisical patients, and not unfrequently in old bronchitic expectoration, in kidneys affected with granular degeneration, and under various similar circumstances in different parts of the body; I say their great resemblance to globules so obviously the result of local action, would lead one to be cautious in giving a decided opinion on the subject, and the more so, as, from the vascular system itself being affected, it might well be conceived possible for them to have arisen in this case, as in others, from local action.

The last, and certainly the most important question, is as to the possibility and the probability of effecting a cure. If, as I believe to be the case, the early stages of this enlargement and induration of the spleen are not accompanied by that total alteration in the character of the blood above described,—if they are simply dependent on some faulty modification of the nutritive functions,—they may possibly be arrested, or entirely got rid of, by careful and appropriate treatment. And experience seems to justify this conclusion; for Mr. Twining and others have put cases on record which have ultimately recovered after local depletion, and the exhibition of iron and other remedies calculated to improve the general health. But all agree as to the generally intractable nature of this chronic induration; like an enlarged gland in the neck of a scrofulous person, it is from the first a disagreeable, dangerous symptom, not so much from the mischief which itself produces, as from the state of system of which it is an index, and from which some future real danger is to be apprehended. And as in the latter case, so in the former, this state of system, this constitutional cachexia, when once induced, is most difficult to be got rid of; and though care and attention may, in the early stage, enable us to throw it off, our increasing efforts will not avail us if time be lost in effecting its removal. If once the formative functions have been so far perverted as to give rise to the generation of these granular globules, the whole current of the blood, in consequence altered in character, and the process of nutrition throughout the body therefore implicated in the changes taking place, the disorder may indeed be looked upon as hopeless.

Before quitting this subject, it may not be uninteresting to place in juxtaposition with the case above cited, a brief outline of one, as I believe, in every respect similar, which fell under my observation, in St. George's Hospital, in the year 1842.* The following is a brief abstract of the notes I took at the time. William Varley, æt. 39, a tailor by trade, was admitted on the 9th of March under the care of Dr. Nairne. It appeared that he was a native of Yorkshire, but had lived for the last twenty years at Maldon, in Essex, during which time he never had a fully developed paroxysm of ague, but suffered, on several occasions during the last year of his residence there, from "severe shivering fits," of short duration, constituting what he called "slight touches of ague." About eight or ten months after the first attack of these rigors, having for some time previously been suffering from languor and symptoms of dyspepsia, he perceived a hard tumor in the left hypochondriac region, which the doctors told him arose from malarious influence; and as he underwent a course of salivation and other medical treatment without receiving any benefit, he was advised to leave Maldon and come to London. This was in the autumn of

---

* Many such cases are to be found recorded in various treatises on the subject. A very well-marked instance of the kind is recorded by Dr. Bright, in Guy's Hospital Reports, vol. iii. p. 420.

1840. He did so, accordingly, but the tumor, nevertheless, continued to increase in size; he lost his strength, his bowels became habitually costive, and his gums so soft and spongy as to bleed on the slightest occasion.

He was admitted in the condition above described; and on examination of the abdomen a large, hard, defined tumor was found occupying the left side, extending towards the right, about an inch beyond the mesian line, inferiorly almost as low as the crista ilii, and superiorly, as shown by percussion, very nearly up to the left mamma. It was distinctly notched along its anterior border. It was not very painful on pressure, but occasioned great uneasiness, almost amounting to pain, if he attempted to lie on his right side.

His bowels being generally confined, blue pill, and subsequently sulphate of magnesia, were given with a view of accelerating their action; while full doses of bark and quina were ordered to be taken three times a day.

In the course of a few days he was made out-patient, but continued to take the remedies as before.

On the 6th of April he was re-admitted. The tumor appeared to have diminished somewhat in size (probably it had only shifted its position in consequence of the purging), but his general health was much impaired; his complexion had become sallow; his skin hot, harsh, and unperspiring; he suffered greatly from thirst, and complained of languor and headache; his appetite had failed, and he daily lost a considerable quantity of blood from the bleeding of his gums. The same plan of treatment, but with the addition of a little sulphuric acid, was pursued, and for a time again he appeared to rally. On the 18th, however, he directed attention to a considerable swelling on the right hip, apparently arising from an inflamed bursa. This was extremely painful, and prevented his obtaining rest at night; and as to the touch there appeared to be fluctuation, a grooved needle was introduced by the late Mr. Walker, with a view of ascertaing the fact. No fluid, however, escaped, and the joint was therefore painted over with tincture of iodine. The pain and swelling of the hip, however, rapidly increased; and on the 20th Mr. Walker again thought it necessary to have recourse to puncture, and on this occasion a considerable quantity of sanious fluid was let out, affording for the time decided relief. But the mischief was not arrested; diffuse cellular inflammation of the thigh ensued, and in spite of opiates and stimulants he expired on the 27th.

The following is an outline of the post-mortem investigation:—

The hip-joint was healthy, and the thigh presented the ordinary appearances observed after diffuse cellular inflammation. Lungs healthy in structure, but gorged with red frothy serum. Heart thin and flabby; cavities dilated, valves healthy. All the adjoining vessels, the aorta and its primary branches, the pulmonary artery, as also the jugular and subclavian veins, were enormously enlarged and filled with semicoagulated blood of a peculiarly grey colour. The other vessels in this region were not examined. The whole mass of the blood was coagulated, but there were no distinct fibrinous clots. The liver was of a pale colour, much enlarged, and firm in texture. The spleen was of a very large size, weighing three pounds and three-quarters, measuring nine inches in its long and six inches in its short diameter. It was very firm in texture, crying under the scalpel, and presented a mottled appearance, varying from a dirty white to a light grey, light yellowish-brown, or a brick-red colour. The kidneys were healthy. Intestines distended with flatus. All the vessels of the abdominal viscera were greatly enlarged. I have no note as to the appearance of the blood in this situation.

Now my reason for believing that this case is in its nature identical with that of Thomas Winter, is founded on the fact, that in its essential characters during life, and in the condition of the parts after death, the two are so exactly similar. In both cases the appearance of the tumor was preceded by well-marked symptoms of dyspepsia; in both a peculiarly distressing sense of languor was from the first a leading feature; in both the tumor appears to have been of the same character, gave rise to the same local changes, and, as far as can now be ascertained was accompanied by the same general symptoms; a spongy state of the gums was induced, and an hæmorrhagic tendency established; and the only apparent difference between them was in the hæmorrhage taking place from the gums in the one case, and in the other more generally from the nostrils. In both instances the spleen, in both the liver, was enlarged; in both was remarked the unusual occurrence of dilatation and enlargement of the blood-vessels, and, though in the latter, unfortunately, the blood was not microscopically examined, in both the equally remarkable fact of a peculiarly grey colour of the circulating fluid.

But if these cases are indeed in their nature identical, the fact would favour the supposition of the former one being connected with malarious influence: for, in the latter instance, the man had resided in a malarious district, and though he himself had never suffered from a direct attack of ague, yet during the eight or ten months immediately preceding the appearance of the tumor, he had experienced several severe rigors, which, though of short duration, and not followed by any well-marked symptoms of intermittent fever, were yet of such a character as to induce him, acquainted as he was with the symptoms of ague, to refer them at once to the influence of malaria. Indistinct agues, Mr. Twining[*] informs us, are apt to attend this form of disease, and when the rigors above alluded to are viewed in connection with the subsequent enlargement of the spleen, they are sufficient, I think, to indicate an obscure connection of the sort, and tend to confirm the opinion which I have formed from the history of this modification of disease, that, under certain circumstances, malaria, or some such analogous influence, acting in all cases obscurely and insidiously, may give rise, independently and apart from the symptoms of ague, to perversions of the nutritive functions, and so to the production of those changes and those symptoms, which I have thus been induced to detail.

---

[*] Twining on Diseases of Bengal, p. 300.

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from page 246.]

Part IV.

It has been objected to some of the conclusions which were drawn from my experiments on venous obstruction, that the kidney operated on was necessarily exposed to an amount of disturbance which might possibly excite inflammation of the organ, and, in that case, the phenomena in question should be ascribed to the existence of that disease rather than to the mere physical disorder of the circulation. The very brief period which intervened between the performance of the experiment and the examination of the urine (being in many instances only a few minutes) might perhaps have furnished a sufficient answer to this supposition. But I thought it better to try the question fairly by a direct appeal to nature, and accordingly performed the two following experiments on rabbits of the average strength and condition.

Exp. 1. — The left kidney of a healthy rabbit was exposed in the usual manner, drawn out of the abdomen through the wound in the loins, cleared of the investing cellular tissue, and immediately afterwards returned; the wound being then closed by suture. The animal was killed at the end of an hour and a half. On being weighed this kidney was found to be only nine grains heavier than the right; the weight of the latter being 73 grains, that of the former 82 grains. The left ureter presented nothing extraordinary in its appearance, being neither distended nor discoloured. The bladder contained six drachms of urine which remained quite clear after the application of nitric acid and heat.

Exp. 2.—A precisely similar operation was performed on a rabbit of the same size, and the animal killed at the end of two hours and a half. The right kidney weighed 80 grains; and the left, the one exposed and handled, 84 grains; being an increase of only four grains. The bladder contained five drachms of opaque urine, which became quite clear on the addition of nitric acid.

The first law which I shall seek to establish on experimental evidence is the following; viz. That an obstruction to the return of blood through the renal vein will cause the presence of either liquid albumen, coagulating lymph, or blood in the urine secreted by a kidney otherwise healthy.

For this purpose I subjoin, in a tabular form, the results obtained in a number of experiments; a detailed account of all of which, with the exception of the two last, is contained in the 26th volume of the Medico-Chirurgical Transactions.

TABLE I.—*Exhibiting the results of twenty-one experiments in which the renal vein was more or less completely obstructed.*

No. of experiment.	Interval between its performance and the examination of the urine.	Condition of the urine secreted by the affected kidney; so far as regards the presence in it of albumen, lymph, or blood.
1	10 minutes	Slightly albuminous.
2	30 minutes	Slightly albuminous.
3	30 minutes	No urine in bladder: ureter not examined.
4	10 minutes	Highly albuminous.
5	6 minutes	Very highly albuminous, and some slight appearance of lymph in the pelvis of the kidney.
6	3½ minutes	Bloody: (taken from the ureter).
7	1 hour	Bloody.
8	1 hour	Slightly albuminous.
9	30 minutes	Highly albuminous.
10	7 minutes	Slightly albuminous.
11	1 hour	A mass of pellucid lymph in the bladder.
12	1 hour	Bloody, and contained a fibrinous coagulum.
13	1 hour	Water contained lymph and blood.
14	40 minutes	Bloody.
15	4½ days	Muddy, and faintly albuminous.
16	18 hours	Bloody.
17	1 hour	Bloody.
18	24 hours	Moderately albuminous.
19	2½ days	Reddened by blood, and highly albuminous.
20	2½ hours	Ureter contained a fibrinous coagulum, stained of a reddish colour at one point, and above it some highly albuminous urine.
23	2½ hours	Bladder contained highly albuminous urine, which was also viscid and glairy; the ureter contained some distinctly fibrinous matter, which was perfectly transparent; one piece in size and appearance exactly resembled a particle of sago.

Now it will subsequently be shewn that the results thus obtained precisely correspond with the phenomena generally admitted to constitute the primary effects of inflammation. Even coagulating lymph, the effusion of which is to this day mentioned by writers as the essential characteristic of that state, and as furnishing the only satisfactory distinction between it and congestion, will be seen to have occasionally followed the application of an impediment to the blood's passage through *the smaller vessels* of the kidney. The peculiar circumstance which determines the production of one or other of the different effects met with will soon be made apparent. But I may remark that these experiments are, so far as my knowledge extends, the first in which the interesting, and—both in a therapeutical and pathological point of view—important process of the effusion of coagulating lymph has been traced to the operation of a purely physical cause.

In pursuance of the inquiry I shall

now proceed to shew that the variety in the effects produced is not altogether dependent upon, nor explicable by, a difference in the degree of completeness of the obstruction. To be satisfied of this it is only necessary to examine the following Table; which proves that the same degree of obstruction may, in different cases, be productive of very different effects.

TABLE II.—*Giving the results of eight experiments, in all of which the closure of the renal vein by ligature was immediate and complete.*

No. of experiment.	Marked in the previous table No.	Interval between application of ligature and examination of the urine.	Condition of urine as regards the presence in it of albumen, lymph, or blood.
1	1	10 minutes	Slightly albuminous.
2	2	30 minutes	Do. Do.
3	4	10 minutes	Highly albuminous.
4	5	6 minutes	Very highly albuminous, and some appearance of lymph in the pelvis of the kidney.
5	6	3½ minutes	Bloody, (taken from the ureter.)
6	7	1 hour	Bloody.
7	20	2½ hours	Highly albuminous, and a fibrinous coagulum in the ureter.
8	21	2¼ hours	Very highly albuminous; transparent fibrine in the ureter.

The facts contained in the first table having established the general principle, that an obstruction to the blood's return from the kidney will cause the presence, in the secretion of that organ, of one or more of certain substances evidently derived from the minute blood-vessels of the gland, the point which next presents itself for examination may be thus expressed; viz To what, if any, physical cause are we to ascribe the different results met with in a number of experiments performed in precisely the same manner, and, so far as external circumstances are concerned, under the same conditions? We have, by the results presented in the last table, gained one negative answer to this question. And I now proceed to narrow the inquiry still further, by placing before the reader another table, which will prove that the nature of the effused products bears no proportion to the increase in the quantity of blood contained within the vessels of the organ, nor consequently to the amount of distension of those vessels (see next page).

(When the urine is described as simply albuminous, it is to be inferred that there was no discolouration from any admixture of blood. Before weighing the kidneys the vessels were divided close to their entrance into the organ, and the blood permitted to ooze from them; but no pressure was applied. The left kidney was, with one or two exceptions, that operated on; but I satisfied myself, by frequent comparisons, that there is no natural inequality between the weight of the two organs.)

From this last table, then, we may confidently infer that there is no relation between the nature of the effused matters, and the extent of the dilatation of the coats of the vessels, as measured by the quantity of blood they contain. And here I cannot avoid directing attention to the close resemblance which some of the results observed in these experiments bear to the phenomena noticed in chronic inflammation affecting the human subject. For in the latter case we also generally find the same inequality between the amount of local hyperæmia and the degree of intensity of the inflammatory attack, as indicated by its symptoms and immediate effects.

It having thus been shewn that neither the degree of completeness of the obstruction, nor the extent of dilatation of the vessels, constitutes the peculiar cause of the difference in the results induced, let us now proceed to examine the only remaining physical agency to which that difference can possibly be ascribed. And, as calculated to elucidate the nature, operation, and source of this agency, it may be well briefly to consider the general effects produced by the obstruction of any freely-moving mass of fluid.

Table III.—*Showing the relative weights of the healthy and engorged kidneys, with the nature of the changes observed in the composition of the secretion of the latter.*

No. of experiment; same as in first table.	Weight of healthy kidney in grains.	Weight of engorged kidney in grains.	Relative Weights.	Condition of urine.
1	20	40	1—2	Slightly albuminous.
2	26	51	1—2 (?)	Do. Do.
3	26	50		Not examined.
4	35	70	1—2	Highly albuminous.
5	25	50	1—2	Very highly albuminous, with lymph.
6	60	90	1—1·50	Bloody.
7	98	175	1—1·78	Bloody.
8	40	84	1—2·10	Slightly albuminous.
9	50	150	1—3	Highly albuminous.
10	42	73	1—1·73	Slightly albuminous.
11	100	130	1—1·30	A mass of clear lymph.
12	50	90	1—1·80	Bloody, with a fibrinous coagulum.
13	Not	ascertained.		
14	36	68	1—1·94	Bloody.
15	Not	ascertained.		
16	64	182	1—2·84	Bloody.
17	90	170	1—1·88	Bloody.
18 19	Not	ascertained.		
20	39	76	1—2 (?)	Highly albuminous, with fibrine.
21	46	92	1—2	Do. Do.

I have throughout these investigations had constant occasion to dwell upon and apply this general hydraulic principle; viz. that the degree of lateral pressure which a fluid exercises while traversing a tube, or system of tubes, is altogether dependent upon the relative facilities afforded for the influx and efflux of that fluid. And, as a corollary from this law,—that any circumstance which tends to lessen the rate of discharge, while the rate of influx continues unaltered, will instantly, and in a very rapid ratio, increase the lateral pressure of the column of fluid till it becomes equal to the whole impelling force.

Now in the case of the fluid traversing the vessels of the living body, that impelling force is clearly derived from, and proportionate to the amount of, pressure of the general mass of aortic blood; which pressure is known to fluctuate very considerably, and sometimes very suddenly, from various circumstances, particularly those affecting the vigour and frequency of the heart's action. It follows, therefore, that the actual amount of lateral pressure with which each minute column of detained blood acts against the walls of its containing vessel, will, in every case of obstructed capillary circulation, be wholly regulated by two essential circumstances; viz. the degree of completeness of the local obstruction on the one hand, and the actual amount of impelling pressure then resident in the mass of arterial blood, on the other. The latter is, in all cases, evidently the *active* cause of a morbidly increased lateral pressure of the capillary blood-columns. But this tendency to an equal diffusion of the blood's pressure in the minute vessels, which is equivalent to either a total perversion or suspension of the healthy uses of the streams traversing them, is only observed when, from some cause disturbing the natural proportion between the rates of influx and efflux of the blood circulating through the vessels of the part, the rate of discharge of that fluid through the veins is not equal to its rate of influx through the arteries. Such a disproportion necessarily existed in all my experiments on the kidney; and the amount of lateral pressure of the columns of blood detained in the minute vessels of each, after the partial or complete closure of the vein, was—as in every other case of obstructed circulation — regulated thus. Assuming the impulse of the arterial blood to have been equal in a number of animals at the moment of performing the experiment, any difference in the amount of lateral pressure of the impeded columns of blood must then have been altogether dependent upon some inequality in the degree of obstruction existing in the renal vein of each. And on the other hand, where, (as in the experiments comprised in Table II.) the obstruction was in several cases equally complete, the amount of lateral pressure of the stagnant masses of fluid was then necessarily quite equal to the onward pressure of each capillary blood-column, and, like it, wholly proportioned to the general pressure of the great mass of arterial blood.

But in examining how far this difference in the lateral pressure of the blood contained in the vessels of the kidneys operated on is capable of explaining the variety in the effects produced, it is necessary to bear in mind the peculiar physical composition of that fluid while circulating in the vessels of a living animal. For general purposes it is sufficient to consider it as consisting of liquor sanguinis and red globules; but in connection with the present inquiry we must scrutinize more closely the composition of the former substance. It is this which gives to the blood all its peculiarities as a fluid, and in it also resides that self-coagulating power which distinguishes the vital from every other albuminous solution.

Now the liquor sanguinis, while in its natural state of motion, is, by a very simple process of physical analysis, clearly resolvable into three distinct portions, the constituent particles of which possess very different degrees of cohesive force. We have, first, a *serosity or aqueous* fluid, holding in solution various saline and animal matters, but no albumen. And from the great mobility of its particles this fluid is enabled to permeate with the greatest facility any porous structure, and is in fact naturally filtered through the coats of the Malpighian vessels in the form of urine.

The next ingredient of the liquor sanguinis is intermediate in its consistency between the aqueous fluid just described, and the still more cohesive self-coagulating albumen or fibrine. It corresponds to the serum of coagulated blood, and is identical with the coagulable lymph of old writers; being neither more nor less than a solution of albumen, and possessing in common with all such solutions much more viscidity than any simply aqueous liquid. Lastly, we have to notice the highly cohesive, self-solidifying substance which gives to the healthy blood its characteristic property of spontaneous coagulation. And so great is the tendency of the particles of this coagulating lymph to aggregate in masses, that the unceasing motion of the blood, in addition to its other important uses in the animal economy, is found to be essential to the preservation of the fluidity of the circulating mass.

From this variety in the cohesiveness of these three constituents of the liquor sanguinis, it is very evident that different degrees of force will be required for the expulsion of each through the same porous membrane. And even were there no collateral facts to support the conclusion, I do think that a common-sense view of the subject should impress every unprejudiced mind with the conviction that the effusion of one or other of these substances through the invisibly minute pores of the capillary membrane is, in every case, mainly regulated by the amount of lateral pressure, or expelling force, existing in the columns of fluid blood contained within those vessels.

The grounds on which this conclusion rests may be thus stated:—

1st. The impossibility of adducing any other rational physical explanation of the variety in the results met with, both in my experiments, and in cases of locally obstructed circulation in man and other animals. We must, therefore, in the absence of any other principle, either consent to adopt this law, or be satisfied to continue in a state of ignorance which is not the less complete from its being disguised beneath a mass of pompous but unmeaning words. This, it must be confessed, is only a negative argument in support of the proposition; but—

2ndly. It is an indisputable fact that in all obstructed blood-vessels there exists behind the impediment a mass of detained blood, the lateral pressure of which is unnaturally great. The immediate cause, therefore, to which I have assigned effusion is demonstrably true, so far as regards the fact of its existence, as an adequate expelling force, at that particular portion of the blood-vessels whence the exuded or extravasated matters are manifestly derived.

And, 3dly, as it can be shewn that the general force of the blood, both in different individuals and in the same individual at different times, is liable to very great changes in its amount, so also will the lateral pressure of the blood contained in any obstructed vessel be necessarily subjected to an equal range of variation. This fluctuation in the amount of lateral pressure of the minute blood-columns in different individuals will therefore explain the variety in the substances (constituents of the liquor sanguinis), expelled through the porous membrane of the capillary vessels in a number of cases of obstructed circulation. We may consequently, (reserving for future consideration some modifying circumstances), claim for the above mentioned law a firmer foundation than mere negative evidence, and assert that, as it is possible to assign the varied phenomena in question to a cause demonstrably true and adequate to their production, it would be unphilosophical and useless to seek for any other till either the existence of that cause is disproved, or its operation is shewn to be imcompatible with the peculiar conditions of the case.

[To be continued.]

DILUTED SULPHURIC ACID IN LEAD COLIC.

LEAD colic has been of late years very prevalent in Turin, and Dr. Bertini, of that city, who has had many of these cases under his care, affirms that the best effects have followed the use of diluted sulphuric acid. Many cases of colic have been effectually cured by the use of this medicine.

ON

SCHIRRHOIDAL DISEASE

AFFECTING THE ADHERENT SURFACE OF THE MUCOUS MEMBRANE OF THE VAGINA AND CERVIX UTERI.

By James Milman Coley, M.D.
Licentiate of the Royal College of Physicians in London, &c.

In the 799th number of the Lancet, at page 468, I published a short essay on Cancroide, Keloide, or Scirrhoide, a singular disease appearing in various parts immediately beneath the integuments of the body. I have lately discovered it invading the adherent portion of the mucous membrane lining the vagina and covering the cervix uteri. The diseased parts are found to consist of hard, isolated, projecting tubercles or puckerings of the mucous membrane, some of which resemble the cicatrices which result from extensive and deep-seated burns, and produce partial contraction of the membrane. The sensation communicated to the finger by the tumors resembles that arising from cartilage; and the morbid parts are moveable, having no adhesion except to the superincumbent integument, by which circumstance, in its early stage, the disease may be distinguished from that species of carcinoma which commences by small immoveable nodules, firmly adhering to the subjacent cellular structure. It may also be distinguished from a congested state of the veins and absorbents, which occasionally seats itself in the cervix uteri or inferior portion of the uterus after labour or abortion, by the œdema and general hypertrophy characteristic of the latter affection. In the progress of the disease softening of the indurated membrane occurs, which terminates in ulceration, which differs from simple ulceration of the cervix and os uteri by being exempt from consequent induration, and from cancer by the absence of adhesion to the adjacent structures, as well as of the fungous excrescences and offensive smell peculiar to carcinomatous vegetations. The disease is the product of inflammation occurring in a cachectic or scrofulous condition, and its essential character is that of tubercle, which is the natural result. For an explanation of the nature and origin of the process of tuberculization, the reader is referred to the articles "Pathology of Pulmonary Phthisis," and "Scrofula," in my work recently published on the diseases of children[*].

Treatment.—Before the processes of softening and ulceration commence, the only remedy required will be one or two grains of iodide of potash twice a day properly diluted. To this may be conjoined some preparation of steel, when the menstrual secretion is interrupted. When a muco-purulent discharge accompanies scirrhoide, the best local remedy will be found an injection composed of sulphate of zinc or alum. It must, however, be observed, that the inflammation affecting the free surface of the vaginal mucous membrane, and producing this vicious secretion, is an accidental and not an essential concomitant. After ulceration takes place all local stimulants must be avoided. In this state tepid water will be found the best injection, the object being to remove inflammation, which is the principal obstacle in all cases to the healing of tubercular ulcerations. The application of nitrate of silver, so efficacious in healing simple ulceration on the cervix or os uteri, denoted and always accompanied by induration in the cellular membrane, will be found to aggravate this species.

CASE.—I was requested by a provincial surgeon to visit a lady in Shropshire. I found she had experienced an abortion about a month before I saw her. She had leucorrhœa, was greatly emaciated, and was confined to bed. On examining the passage, I found the posterior labium of the os uteri on its inner surface hard and gristly. There was also a small tubercle, as hard as cartilage, on its outer surface, just at the basis of the same labium beneath the mucous membrane. I also discovered a longitudinal induration, like an old cicatrix, in the vagina, about three-fourths of an inch below the os uteri. These morbid parts were not tender, neither was the cervix or os uteri. I prescribed the following remedies:—

℞ Potassæ Iodidi, gr. viij.; Tinct. Aurantii, ʒiij.; Aquæ font. ℥viiss. M. capiat cochl. ij. larga ter die cum ij. pilularum sequentium.

℞ Ferri Sulphatis, gr. viij.; Ext. Gentianæ, Gum. Myrrhæ, aa. ʒss. M. et fiant pilulæ xvj.

R Zinci Sulphatis Aluminis, aa. ʒij.; Aquæ font. lbj. M. fiant injectio.

I heard from the surgeon in attendance, about ten days afterwards, that the tumors were scarcely perceptible, that the general health was much improved, and that the discharge was much diminished.

About a month afterwards, the surgeon again wrote to inform me that all the tumors had disappeared excepting that which was seated on the outer side of the cervix uteri, which at length gradually subsided; and at the end of a few months the patient lost all symptoms of disease, and recovered her usual appearance.

47, Chester Square, Aug. 22, 1846.

UNSUSPECTED DISLOCATION OF THE FEMUR.

BY F. WELSH, ESQ.

THE author records this case that it may act as a warning to his surgical brethren, and induce them to make a strict examination into every case of accident, however trifling it may at first appear. A man, aged 28, was partially buried by a bank of earth falling on him whilst he was undermining it. I saw him a few hours after the accident; his only complaint was of slight pain in the back and knee; but as there appeared no distortion of the limb as it lay flexed upon the other, and flexion and extension were not much impeded, I considered it a mere bruise, and treated it accordingly. At the end of a fortnight I saw him again; his report of himself was, that he was much better, had been up, and said, that with a strengthening-plaster he should be quite well. Anxious to see how he could walk, I made him get up, when at once the nature of the accident was too evident—namely, dislocation of the femur on the dorsum ilii. With the kind and able assistance of Mr. Webb and Mr. Wood, the pullies were applied. We gave him tartrate of antimony, three grains; tincture of opium, forty drops. Steady traction was kept up for twenty minutes, when the bone (with some manipulation) was happily reduced. The patient was rather under the middle stature, though muscular. — *Provincial Med. and Surg. Journal,*

---

[*] A Practical Treatise on the Diseases of Children. By J. M. Coley, M.D. Longman and Co. London. 1846.

MEDICAL GAZETTE.

FRIDAY, SEPT. 4, 1846.

While there is a strong feeling in England that the sale of medicines by practitioners should be suppressed, and that charges should be made for medical attendance only, we are not surprised to find that a question respecting the propriety of the practice, has been recently raised in France and Belgium. All who reflect upon this subject, must perceive that both the patient and practitioner will ultimately benefit by the change—the patient by getting rid of the necessity for swallowing draughts and pills at stated hours for weeks together, and the practitioner by the removal of an impression which exists in the public mind, that the medicines are prescribed rather for his own profit, than for his patient's benefit. To withhold from practitioners the option of dispensing their own medicines, appears to us to be impossible, as the profession is at present constituted. Some medical men may have more confidence in medicines prepared by themselves than in those dispensed by druggists; and this feeling will especially prevail in rural districts, where the trades of the druggist and the grocer are often united. In other instances the patient must rely entirely upon the practitioner for the supply of medicine. A more serious objection to the entire abolition of this practice of dispensing medicines by members of the medical profession, exists in the fact that the law has not yet recognized a regularly constituted body of pharmaceutists. The laudable efforts of the Pharmaceutical Society have tended to improve considerably the status of the druggist in England; but still, much remains to be done. It is *entirely optional* with an individual, whether he will submit to any course of instruction or not, before he undertakes the responsibility of dispensing medicines to the public. This option should be forthwith taken from him by law; in short, no one should be permitted to prepare or vend medicines who has not gone through a regular course of instruction, followed by a rigorous practical examination in chemistry and pharmacy. The day is probably not far distant when a wise legislature will see the policy of conceding so reasonable a principle, to those who feel an interest in the advance of medical science and the improvement of medical practice.

The objections which exist to the entire removal of this questionable privilege of dispensing medicines from the hands of medical practitioners, cannot, however, apply to the abolition of the practice of regulating the amount of remuneration by the number of pills, draughts, powders, and mixtures, through the purgatory of which many individuals are doomed to pass from the moment that they fall into the hands of those members of the profession who happen to be lovers of polypharmacy. It is this irrational practice which has given rise to the popular belief that diseases are cured by physic alone; and if, as it often happens, the medicines fail in affording relief, the patient falls into the hands of a quack, who, profiting by the failure of the regular practitioner, frequently works a marvellous cure by simply withdrawing him from this system of over-medication. If this trading kind of remuneration were abolished, a practitioner would not only be left more free to treat a disease on scientific principles, by prescribing only those medicines which were absolutely required for treatment, but he would take a much higher and more creditable standing in public opinion.

We have heard it urged as an objection to the change here suggested, that the public would not be satisfied unless they could make out a connection between the quantity of medicine taken and the amount actually charged for medical attendance. Such a prejudice may exist among ignorant persons; but, in our judgment, the way to improve the profession will be, not by lowering it to meet the views of the ignorant, but rather by following that course which reason suggests, and trust to time for the removal of the error. The prejudice itself has been created by the mistaken views of the past generation of practitioners, and it is not likely, therefore, that it will immediately disappear. Among the middle and better informed classes of society, a strong feeling prevails that they are over-drugged; and we believe in many instances they dispose of the diurnal draughts and nocturnal pills in a way little anticipated by the medical attendant. Their confidence in allopathic practice is not likely to be improved by finding that they recover without taking the medicine which has been so industriously furnished to them by their medical attendants; and on another attack they may probably learn to dispense with their services altogether.

It is satisfactory to find that this question, so important to the social position of medical men, has become at the same time a subject of discussion in England, France and Belgium. The feeling in France, like that which exists in England, is, that the practice of receiving payment for medicines should be forthwith abolished. In Belgium there appears to be a division of opinion: many practitioners are for the retention of the commercial privilege, but the Academy of Medicine is decidedly in favour of its abolition. We conclude by saying that we shall heartily rejoice at the extinction of a practice which alone, since the dissolution of the partnership between "barbery" and "chirurgery," has given a trading character to the noble profession of medicine.

CASE OF CONGENITAL CATARACT IN BOTH EYES, ONE OPERATED ON SUCCESSFULLY. BY GEORGE DOCK, M.D. OF HARRISBURG, PENNSYLVANIA.

Dr. Dock's patient was a little girl about three years of age, a fine, healthy, intelligent child, but with perfectly formed cataract in both eyes, which inquiry proved to have been congenital. As the constitution of the child was favourable, the eyes healthy, well formed, and handsome, the pupil well dilated, and free from adhesions all around, Dr. Dock determined to operate on one eye first, waiting to see the result without proceeding further. Having prepared the patient that day, he next morning applied belladonna round the right eye, upon which, when the pupil had become dilated, he proceeded to operate by introducing a small straight needle into the sclerotica about a line and a half from the cornea; he then carried it above the lens, and finding it to be a soft capsulo-lenticular cataract, divided the lens and capsule from above downwards, before backwards, &c., disengaging the capsule well from the ciliary body, so as to leave nothing to form a secondary cataract caused by the remaining part of the capsule floating about the pupil and obstructing the rays of light. Being one of those soft cataracts which are so troublesome to keep down after couching them, it rose several times, but at length the operator made a bed for it in the vitreous humor, and kept it there with his needle several seconds, when with a gentle rotatory motion, he disengaged the instrument and withdrew it. The pupil was clear and beautiful. The ordinary precautions were taken subsequently, and three or four days after the operation it is stated that the conjunctiva was perfectly clean and healthy, that "the eye looked beautiful," and that there had not been the least discoverable enlargement of the vessels in the neighbourhood of the wound caused by the needle. The patient is now so well as to render it probable that Dr. D. will soon be able to operate on the other eye.

This is the third case of congenital cataract which the narrator has operated on within the past ten months, and all with the same complete success; in none of the cases has there been so much inflammation as to require a purge." — *Philadelphia Medical Examiner.*

Reviews.

'esmerism in India ; and its Practical Application in Surgery and Medicine. By James Esdaile, M. D., Civil Assistant-Surgeon H. C. S. Bengal. Sm. 8vo. pp. 287. London: Longman and Co. 1846.

'HEN we declare that we are utterly
earied with mesmerism and its pro-
ssors, we believe that we are merely
pressing a feeling which is equally
itertained, not only by the majo-
ty of the profession, but also by
arly the whole of the well-educated
rtion of the community at large.
'e feel thus, not on account of any
culiar tediousness in the details
hich are from time to time vouch-
fed by the mesmerists as evidences
the astounding powers of animal
agnetism, and of their own surpass-
g cleverness; for a large proportion
such writings are, apart from their
llacy, exceedingly amusing, being
mmonly the work of ingenious and
thusiastic men who do not stick at
ifles, and whose narratives seldom
il in briskness and vivacity, however
ficient they may be either in truth
argument. Neither can we attri-
ite our distaste for the subject to
pleasant reminiscences of long-
ntinued and vain efforts to expose
d disprove the errors of the so-called
ience, for we have ever felt unwilling
lose time in sifting the fallacies of
octrines which we well knew ninety-
ine out of every hundred of our
aders fully believed to be fallacious,
d because we have been satisfied to
ave the matter to that great analyser
f all truth—time; and to allow those
en who have ably stood forward as
e principal recusants of this theory
divest it gradually, but surely, of the
anifold errors with which credulity
d fraud have been from year to year
nceasingly employed in surrounding
. Our distaste for the subject has
risen from a far stronger feeling
an either of these,—from a conviction
at the views of the mesmerists,
ased, as we certainly believe them to
e, upon a slight foundation of truth,
ave assumed the character of one of
ose plausible but fallacious doctrines
hich have, ever since the establishment of medicine as a science, arisen, as if expressly for the purpose of delaying and rendering difficult the attainment of true knowledge, by engaging men in vain and difficult inquiries, which lead to no good result, but effectually divert them from laying out their talents in the acquirement of real and substantial knowledge; at the same time rendering themselves and their profession alike the marks of distrust and reproach. Let us take a brief retrospect of some ten or twelve years, and observe what mesmerism has done for the profession and for humanity during that period. First, for the good which it may have effected in advancing the sole aim of professional investigation and exertion—the relief of physical disease. To take the fullest and most liberal view of the matter, some hundred or two of individuals may have been, by mesmeric influence, rendered oblivious of, possibly insensible to, the suffering attendant on surgical operations; and in certain instances, repose may have been procured for patients who had long suffered from unrest. This is the very utmost that can be conceded on the debtor side of the account; the items on the creditor score are infinitely more weighty. Our own experience has proved to us that mesmerism has added vastly to the immense body of unscrupulous empirics who have settled like an undying and ever-multiplying swarm of locusts upon our community: we have seen, too, that the adoption of these views and this practice has been the means of raising, in almost every town in England, some one or more scarcely qualified practitioners to a degree of fame and notice which has been alike injurious to the character of the profession, and, for a time at least, greatly subversive of the interests of those practitioners who continue steadfastly in the proper course. But this is not all; we have seen men who had already attained, by labour and talent, a worthily high position in our class—men respected and looked up to for their superior attainments and unquestioned character—who were, almost in a moment, cast suddenly and irretrievably from their high station, with their hopes of professional success ruined, their authority destroyed, thrown aside as untrustworthy, useless visionaries, and

all this in consequence of their own culpable credulity in adopting a system of juggling which it required no faculty more profound than that of a little plain common sense to see through and to expose. The good, therefore, is at best doubtful; the evil has been, and still is, deep and extended.

We must now, however, pass on to details, and dwell briefly on the merits of the work before us. We must commence this task by saying that we have full confidence in the honour and good intentions of the author. He evidently, and unfortunately, fully believes absolutely in the correctness of every word that he has written respecting animal magnetism; unfortunately, we say, because error founded upon enthusiastic conviction, is an almost hopelessly incurable mental disease. The history of the circumstances which have led to the appearance of this little volume is briefly this: The author, previously not at all disposed to maintain the efficacy of mesmerism, and acquainted with the practice only from reading, was induced to attempt to magnetise one of his patients (a native criminal of the lowest class) merely with a wish to relieve the man's sufferings, without much expectation that the remedy would produce any effect. The manipulations did, however, he informs us, produce very marked and striking effects, which were sufficiently convincing to induce the author to commence with great activity a course of mesmeric experiments, the issue of which course has been to render him, within a very few months, an ardent follower of Mesmer, a believer in clairvoyance, the powers of magnetised water, mesmeric catalepsy, somnambulism, and all the other possible and impossible characteristics and assumed results of the power in question, to the exclusion, we believe, of phreno-magnetism, which appears to be considered as a dangerous kind of heresy by the orthodox followers of the "true and original" doctrine. But most especially he is convinced of the efficacy of animal magnetism in preventing pain during the performance of surgical operations; and he gives a return, illustrated very copiously with details and remarks, of seventy-three "painless surgical operations," which he performed during the eight months that immediately preceded the publication of his book. We are greatly unwilling to attempt an analysis of Dr. Esdaile's book; to argue out fully, one by one, the manifold points of uncertainty, and the very strongly apparent sources of fallacy with which the entire volume is fraught, would require the ill-bestowed labour of a month. And to attempt to throw discredit upon the whole of its details, or to treat the greater part of its statements with contempt, would be equally uncourteous and unjust to the ingenious, and certainly well-intentioned, author. We believe the fairest course will be to quote a few of the statements which appear to form the strongest part of the evidence adduced by Dr. Esdaile in proof of his doctrines; and also to bring forward one or two of those portions which we conceive set forth the leading blemishes alike of the book and of the system, leaving our readers to form their own judgment upon the matter.

The following is one of the least exceptionable of the author's narratives of "painless operations:"—

> "June 12th.—Lokee, a peasant woman, aged 60, has a tumor on the calf of the leg of nine years' standing: it is full of deep ulcerations and maggots. I tried to subdue [magnetise] her yesterday, but the pain did not allow her to get beyond common sleep. To-day, after much trouble, first by one person and then another, she was entranced, and I cut out the tumor in the presence of Captain Elder, without her feeling it, and we left her sleeping.
>
> "June 13th.—She awoke three hours after the operation; felt no pain on waking, and asked me to-day who cut off the tumor?
>
> "Oct. 24th.—The woman Lokee has come back to hospital with a return of the tumor cut out in June last, to be mesmerised.
>
> "Oct. 27th.—She has been mesmerised daily for two hours, but without effect. I therefore operated on her to-day, as we could spare no more time for her, others requiring equal attention. The poor old woman screamed miserably the whole time, crying that I was murdering her; and she continued in the greatest pain for hours afterwards," (pp. 75-76.)

The following well deserves to be placed among the curiosities of medical literature;—the exhibition of mesmeric experiments in a court of justice in

of crimes believed to have been
itted by a supposed mesmerist by
of his art.

native barber (the barbers in
it Memphis, modern China, and
stan, appearing to rival the
cians in the practice of this kind
juration,) was detected in the act
napping, and suspected, appa-
on the doctor's suggestion, of
g accomplished his theft by the
nce of mesmerism.

ing summoned," says Dr. Esdaile,
he magistrate's court as a witness, I
sked, 'If I thought it practicable to
off a person in the way described in
idence?' I replied that I thought it
e, because I had just done something
ke it, by making a prisoner follow me
the hospital enclosure, without his
g it. The magistrate committed the
but when it came to be tried before
lge, it was found to be utterly impos-
to convey even a glimpse of my
g to the mind of the native law
s who had to try the case; and the
therefore, asked me if I had any
ion to show the Moulavies in court
was possible to make another follow
voluntarily, as I said. I answered
was willing to make the experiment,
ould engage to do nothing: if he
order three men, whom I named, to
it for to court, I would try what
be done, the men to be kept in total
nce of our intentions. In a day or
fter I was requested to attend the
s court, which was crowded with
eans and natives. Nazir Mahomed
rought in, and placed at the bar. I
rised him in a few minutes, and led
with his arms catalepsed, out of the
and set him walking down the road
ne distance, making his arms rigid in
position as long as I pleased. I then
ed him at the bar, where the judge
Moulavies all loudly addressed him,
it his paying any attention to them,
hey were obliged to ask me to awake
This I did; and on being asked from
nch if he had left the room since he
ntered it, he confidently answered
While they were speaking to him in
I approached, unperceived, behind,
ntranced him on the spot, in the act
aking. The words died on his lips,
e became insensible to all voices that
sed him: he was again awoke by
g in his eyes. Madub was put in the
and did not see me on entering. The
and Moulavies engaged him in con-
ion; and while he was speaking with
tion and intelligence, I catalepsed him
behind, while in the usual praying attitude of the prisoner at the bar, and, in a moment, he ceased to speak or hear: I was told by those in front that his lips moved as if in the act of speaking after he ceased to be heard. He was so deeply affected that all motive power was nearly extinguished, and I had to push him from behind with my finger to make him walk: he walked a few yards with difficulty, and then becoming suddenly rigid from head to foot, a slight push sent him headlong upon the floor in a most alarming manner; the fit of rigidity was so instantaneous that I was not aware of it. He was revived with some difficulty, and fortunately was not injured by his fall," (p. 90).

The third native selected by Dr. Esdaile was equally strongly affected.

When our author begins, in after years, to review the details of the first eight months of his mesmeric experience, he will, we think, to say the least, have to regret that he did not adopt more caution in the management of his experiments, conducting them in such a manner that any truths which they might convey, should appear in a perfectly demonstrative and convincing manner. It will be at once perceived that a want of such caution utterly destroyed the value of the above experiment; the author mentions that, "with the facilities of a native barber, he could almost engage to steal a man, woman, or child, daily:" why, then, did he invalidate the certainty of his test by bringing into court three patients of his own,—one, at least, of whom, we are inclined to believe, was a frequently chosen subject of the operator's skill? Had he permitted the judge, or others, to make selection of one or two subjects, the test might have proved a curious and momentous one; but, under the circumstances detailed, we conceive that it absolutely went for nothing. We do not, in the least, question the good faith of Dr. Esdaile, but, in matters of this kind, the experimenter owes it equally to himself and to his science that every possible suspicion of collusion should be entirely absent.

We intended to have remarked rather strongly upon other portions of this work, especially upon the details of a mesmeric exhibition got up by the author in July 1845, where, after an extraordinary series of gesticulations, the unfortunate mesmerised was compelled, in imitation of the vivacious doctor, to take "the 'longitude' of the judges of the Supreme Court with the cool impudence and precision of a cabman, and the gravity of an astronomer;" to sing "Ye mariners of England," and "Hey, diddle diddle," with an energy worthy of a better cause: and, finally, as an eye-witness reports, concluded the experiment by pitching head foremost into Dr. E.'s breast, both rolling on the floor together! Such farcical exhibitions as these must be regarded as neither philosophical nor humane, and can neither advance the fame of mesmerism nor the credit of the medical profession.

Dr. Esdaile is certainly a man of no inferior ability, but we are happy to find it stated in his dedication that he is now exercising his professional talents in a different sphere, and, we trust, with other and wiser objects.

Notice sur l'Invention du Forceps. Par M. Broeckx. Bruxelles, 1846.

Memoir on the Invention of the Obstetric Forceps. By M. Broeckx. Pamphlet, 8vo. pp. 32. Brussels, 1846.

This memoir consists of thirty-two pages of special pleading devoted to the proof of a favourite notion of the author's, now plainly refuted by fact and history. In a late number we published a short account of the invention of the obstetric forceps, the facts having been derived from the respectable authority of Dr. Golding Bird.* M. Broeckx's pamphlet reached us just after that paragraph had been printed. It is an address to the Royal Belgian Academy, in which the writer undertakes to prove that Jean Palfyn, of Courtrai, and not our countryman Dr. Chamberlain, was the inventor of the forceps. After all, this is an absurd subject for a paper war; but as M. Broeckx has considered the error worth printing, we regard it as worth correcting.

M. Dezeimeris, a French writer, long ago stated the plain truth with respect to this invention. Chamberlain, he contended, was the real inventor of the forceps, of which the instrument many years aftererwards used by Palfyn was only a rude imitation. This opinion was based on the testimony of contemporary accoucheurs, and on documents derived from the works of Chamberlain. The great error of the inventor was, that he kept his invention a secret, and thus left it open for any unscrupulous accoucheur to appropriate it.

M. Broeckx attacks, *seriatim*, the reasons assigned by M. Dezeimeris for this opinion. The testimony of contemporary accoucheurs he treats as mere gossip;—with regard to the documents, he contends that they can have no existence, and that Dezeimeris has been guilty of a *lapsus calami*, because he at the same time admitted that Chamberlain kept his invention a secret! Chamberlain, it seems, attempted to deliver a patient of Mauriceau's in Paris, in 1670, but failed, owing to great deformity of the pelvis; *ergo*, according to M. Broeckx, Chamberlain could not have been the inventor, or Mauriceau, who describes the uterus of his patient as having been lacerated, would have known something about the instruments which Chamberlain employed! As to certain proofs in the shape of letters found in an old closet in 1833, and mentioned by Dr. Rigby, the argument derived from this source is, in the worthy Belgian's views, about as conclusive as if it were based on the Arabian Nights' Entertainments. Admitting the fact, he says, no inference can be drawn from the discovery, except upon the most irrefragable proof as to when the letters, &c. were placed there. Who can say that, after the publication of the account of Palfyn's forceps in 1721, a feeling of national self-love did not induce certain English accoucheurs to place these documents where they were found? The descendants of Chamberlain would not have allowed one hundred years to pass without announcing their existence. Again, how does any body know that the letters are in Chamberlain's hand-writing? Who can prove it? If he was really the writer of the memoir respecting this discovery, reference would have been made to it by Chapman or himself in the works which they respectively published; but as there is no such reference, the facts are unimportant. M. Broeckx carries his "historic doubts" still farther. Supposing the hand-writing to resemble that of Chamberlain, how are we to know that, in a country like England, where such things are easy, a forgery has not been committed? After this, our readers will be prepared for his conclusions, which are—1, That Jean Palfyn was the true inventor of the forceps; 2, that he invented them in the year 1721.

---

* July 10, p. 85.

M. Broeckx adopts the sly practice of certain *nisi prius* barristers — of resting his case upon the weakness of his adversary's cause. It will be seen that he especially dwells upon the fact, that Chamberlain never made a public announcement of his invention. But for this accidental circumstance, M. Broeckx's memoir would never have seen the light; for that Chamberlain was the inventor, and Jean Palfyn a mere imitator from what he had seen or heard during his travels in England, are facts which we believe are now safely beyond the reach of M. Broeckx's dialectics.

The best answer which we can give to the ingenious arguments of this writer, is to refer him to page 85 of the present volume of this journal. He will there find that not merely letters, but several pairs of the original obstetric forceps, were, by mere accident, discovered in a place where they had been most studiously concealed. Coins of the reign of Charles I., with household account-books, and other articles which have no connection with midwifery practice, were found concealed with them. Jean Palfyn first announced his alleged invention in 1721, having a few years before visited England. Dr. Chamberlain died in 1683. Surely these facts will suffice to remove the scepticism of M. Broeckx.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Gun-shot wound—The projectile lodged in the body for a period of twenty-seven years.—[Reported by William Brinton, Physicians'-Assistant.]

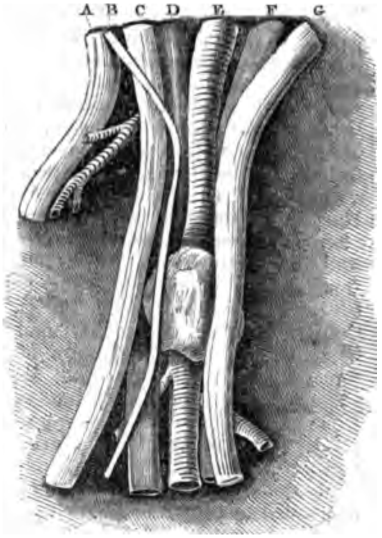
Darius Green, an athletic American, was engaged in a skirmish with some Mexicans in the year 1819, and in climbing over a wall he dropped unexpectedly among a small party of the enemy, by one of whom he was instantly shot. Two slugs entered his left arm, (probably while it was raised in the act of letting him down,) and he immediately fainted. Only one of these was extracted, the other remained in the wound, and soon ceased to give him any inconvenience; indeed, *during the greater* part of the intervening twenty-seven years, there was scarcely a symptom of its presence.

In June last he was admitted an in-patient of this hospital in an advanced stage of cirrhosis. On examination, the arm did not appear to have suffered in its nutrition; the cicatrix exactly corresponded to the situation of a flattened body, which could be plainly felt lying over the brachial artery, and diminishing the pulsation at this part of its course.

He died on the 18th of August. The examination after death exhibited the following particulars:—

The slug was flattened, forming an almost circular disk, which was enclosed in a cyst of dense areolar tissue, and whose surfaces were parallel with the surface of the humerus. This cyst corresponded in height with the insertion of the coraco-brachialis in front, and externally was the median nerve: superficially and internally the inner cutaneous. A little removed from its inner edge was the ulnar nerve; behind it was the artery, and on each side of this, a large brachial vessel.

The neighbouring surface of bone was carefully examined, but no irregularity of any kind was detected.



A, Musculo spiral nerve.
B, Inner cutaneous.
C, Ulnar nerve.
D, Brachial vein.
E, Brachial artery.
F, Brachial vein.
G, Median nerve.
Separated above and below to show their course.

Medical Trials and Inquests.

WEXFORD, July 11th, 1846.

(Before BARON LEFROY.)

Trial for Murder by Poisoning with Arsenic—Detection of Arsenic in the Liver—Acquittal on the Plea of Insanity.[*]

MARY CULLEN, the daughter of a farmer, aged 30, rather heavy looking, but presenting nothing otherwise remarkable in her appearance, was indicted for administering poison to her brother, Michael Cullen, in his food, on the 5th of June last, at Kereight, of which he partook and died. She was not arraigned for poisoning her two other brothers and a woman named Margaret Dempsey, nor for administering poison to her own mother and the son of the said Margaret Dempsey, as counsel for the Crown rested the issue of the whole on the result of the investigation into the cause of the said Michael's Cullen's death.

Mr. SCOTT, Q.C., stated the case:—The unfortunate woman at the bar stands charged in the indictment with the murder of her brother, Michael Cullen; but it is not one brother alone that fell a victim to her dreadful design, but two others, and a woman who had been received into the house for charity. The child of the latter, with the mother of the prisoner at the bar and a fourth brother, through the merciful interposition of Providence, were barely rescued from adding to the number of human lives which the wretched prisoner had sacrificed. A very material question which would fall under their deliberations would be, the state of mind in which the prisoner was at the time of the commission of these crimes, if the evidence should warrant them in arriving at the conclusion that they had been committed by her. He did not mean to say that any individual, committing such a heinous and revolting crime, is not to be made responsible to the law of the land, in some shape or other, whether they were of unsound mind or in the full possession of their faculties, the law affixing the punishment. The law does not excuse a culprit on the plea that he might not be in a clear state of mind on all subjects; but, in the case of the prisoner at the bar, if they find that, at the time of her mixing a deleterious poison to be administered to her mother and brothers, she was not conscious of what she was doing, and what the consequences would be, then she is clearly free from moral guilt, but quite unfit to be again let loose upon society. On the other hand, if she was in the position of a responsible agent, knowing what she was doing, and fully aware of the consequences that would result from her conduct, if the evidence warranted them, they should find accordingly, and leave her to the law of the realm to be dealt with as her conduct merited. Prisoner was a member of a happy and united family, occupying a respectable position in society, the occupiers of land, and quite above the lowest ranks of the community. She was also well informed for her rank of life. There were four young men, brothers of the prisoner, named James, John, Michael, and Thomas Cullen, who, with their sister, the prisoner at the bar, and their widowed mother, Mary Anne Cullen, all resided in one house, at Kereight. He felt it his duty to state, that the prisoner at the bar seemed, *on one or two occasions, affected with fits of dejection and melancholy, and remained whole days without speaking to any one.* On one occasion she deserted her home, and went to the house of a relative, where she remained several days. In fact, this was repeated; but she was sent for, brought back, and received with affectionate kindness. He should state, however, that she had some slight misunderstanding with her eldest brother, and threatened to leave the house, when her brother said that he would tie her to the bed-post. This little difference passed away; and the whole family continued to live in unity and affection. The prisoner, about the month of February last, came to this town, proceeded to an apothecary's shop, and, under the pretext of wishing to destroy rats, purchased six penny worth of arsenic. The boy in the shop, when giving it, told her how to apply it, and prisoner took her departure. In about a *fortnight or three weeks afterwards*, she came to the same shop, and asked for more poison. At first there was some difficulty, but the boy, recognising her as the person to whom he sold the arsenic a short time before, gave her six penny worth more, with directions how to proceed as formerly. Nothing occurred from this period to the 5th of June. On the morning of that day, it will be proved that prisoner put the said poison into a pot of stirabout, which her family used for breakfast, and of which they subsequently partook, and to the effects of which four human beings fell victims. It was the habit of the family to take barley meal stirabout for breakfast. On this morning, the prisoner was standing at the kitchen fire, on which the pot was placed with water in it preparatory to the reception of meal for the purpose of being made into stirabout. Prisoner's mother proceeded to an adjoining room for the meal, and remained away about two minutes. During her absence, prisoner placed the arsenic which she had in her possession in the pot, which diffused itself through the stirabout, and of which the family partook for breakfast. Before they rose from table, its effects became visible; and the brothers, one after another, were compelled to leave the room quite ill. Prisoner remained in the room a witness to all this; and afterwards permitted her mother to eat some of the deleterious food, *and even partook of it herself*. The mother providentially ate but little, and, although taken ill from its effects, was ultimately saved. He should also have stated that a poor travelling woman, named Dempsey, with her son, were permitted by the prisoner to partake of the poisoned food, to which the former's life was sacrificed after great agony, but the little boy escaped. One brother was found prostrated in the garden; another in the yard; the others in different places—all labouring under the most excruciating pain, until death put an end to the sufferings of three, the poor old travelling woman making the fourth sacrifice to the horrible proceeding of the prisoner. When the mother became ill, prisoner, who was also sick from what she had taken, went out to the barn, as she confesses, to hide herself. Every thing that medical aid could supply was resorted to, and, with the exception of the four he had already named, the others were saved. After the examination of the bodies by Drs. Goodall and Furlong, and a careful investigation, a verdict of "death by poison" was returned. In a month after, the Crown Solicitor ordered the bodies to be exhumed, with a view of taking some of the contents of the stomachs, with part of the liver and muscles, in order to test what the nature of the poison was, whereby they came to their deaths. These were accordingly sent up to Dr. Geoghegan, Professor of Forensic Medicine in the College of Surgeons, Dublin, and by him submitted to tests which proved that the poison was arsenic. It was part of the liver taken from Michael Cullen that Dr. Geoghegan so examined; and thus it was that the prisoner at the bar is now on her trial for his murder alone. The practitioners there had no doubt of the four deceased having met their deaths by poison; but they were anxious to have Dr. Geoghegan's opinion on the kind of poison it was: not that the want of this knowledge would alter the character of the crime, or debar them from arriving at a just conclusion. The Solicitor for the Crown ordered the examination merely to satisfy public feeling, and to show that nothing was left undone to furnish a clear and satisfactory view of the whole case.

---

[*] The case which forms the subject of this trial has been already adverted to in a recent number of this journal, under the title of "Wholesale *Poisoning at Enniscorthy.*"

The COURT.—It was not at all an immaterial object to ascertain that it was arsenic.

Mr. SCOTT agreed with his Lordship. They had now to decide by whom was the arsenic introduced into the food, of which Michael Cullen partook and died; with what intent it was so introduced; and, if by the prisoner at the bar, if she were in such a state of mind at the time as to know the consequences of the criminal act she was committing—*if she knew the distinction between right and wrong*. It was not necessary for her conviction that she should know how the poison would act, but whether she was doing wrong at the time of its commission. If the poison fell into the food by accident, they should give the benefit thereof to the prisoner, although it was difficult to arrive at that conclusion, when the previous slow and deliberate preparation was taken into account.

Mary Anne Cullen, examined by Mr. BARLOW.—Remembers the 5th of June last; lived then and still at Kereight, in this county. On that day, James, John, Michael, and Thomas, her four sons, her daughter Mary, and herself, lived together. Witness prepared breakfast that day, composed of barley stirabout. She got the meal of which it was made on the Saturday previous, which was used by her several times before that morning, and made use of by her four sons and her daughter. None of her family was sick previous to the 5th of June. She put water into the pot that morning, which water she brought from the well herself; the salt she put into it she had often used before; she put nothing but the water, salt, and meal into the pot. No one but her daughter and self were in the house at the time. The barley meal lay on a chair in the bedroom. Her daughter was sitting on a chair at the fire when witness went for the meal. Witness stirred the contents of the pot after she put the meal in; took some up afterwards, and laid it on the table. She was only a couple of minutes away from the meal. No one but her daughter was present during that time. The dish she emptied the stirabout into was clean. Her four sons ate of the stirabout. Witness called them in. When they had finished their breakfast, witness ate part of the breakfast herself as well as the the prisoner.

To a Juror.—The stirabout was on the dish before she went for her sons.

Examination resumed.—Her son Thomas stood up, and said there was some queer taste in the stirabout; he is living; witness took only two bits; she had no appetite to take more; prisoner took her breakfast of it; witness thought that her stomach was bad, and that was the reason she could not eat more; a poor travelling woman also got some of it to eat; she came in after witness and daughter sat down to the table; witness said to her daughter that she thought badly of giving that breakfast to the poor woman, when the daughter said it was good enough, and brought her milk; she then sat down and ate her breakfast; after witness went out to the kitchen garden, saw Thomas retching, afterwards John, in the same way, in the garden; James was lying on his belly in the bed, and retching; Michael was also retching on the settle; the sons asked her to go for the clergy; it was not a quarter of an hour after breakfast until they got sick; her daughter was within then, and complaining that she was not well; in a quarter of an hour after she came and lay on the bed with witness; after last All-Hallows day, she set off into Wexford, and remained there for three days; she said that stories were told of her, and that she was afraid of her brothers.—*To Court:* The stories she alluded to were, that she was accused by little boys, when she was going to the well, of being in the family way; witness thought it a foolish notion she took into her own head.

Examination resumed. — Her daughter does not know how to write; she returned to Wexford after an absence of between three and four days; she was brought home by her brother; she got some person to write out a note for her brother-in-law to go for her; she said that she was with Mrs. Bolger, in Customhouse Lane, her own second cousin; she did not say where she was going, nor did she apprise witness of her intention; she went away a second time, and remained away two or three days; this was in about a week after her return; she was never the same girl after being away the first time in regard to her dress and business; her eldest brother spoke to her about neglecting her business, when she said that she would not; her brother said that he would tie her to the post of the bed; *she appeared not in her mind, and very dull, holding down her head in going to mass, so that every person took notice of her; she did not do her business as she usually did;* the house in which witness resides belongs to herself, and would have belonged, with the farm, to her two eldest sons, if witness died; there are twenty-four acres in the farm; her first cousin came home with her when she returned the first time. [When asked to identify prisoner, witness said that she did not wish to see her. The Court accordingly excused her.] Her sons died within an hour of each other, her youngest son being the first, about one o'clock.—*Cross-examined by Mr. Lynch:* Prisoner and her four brothers always lived on affectionate terms; before her daughter went away, she was as good a girl as could be; was quiet and industrious; she perceived the change come in her about All-Hallows; her brothers and herself lived quietly together; her son Michael was also soft; her own brother, Wat, was weak minded; Betty Roach is first cousin to witness; her state of mind was very poor; her brother Tom Roach was also weak, and put an end to himself through foolishness; it was after her sons ate their breakfast that witness and prisoner sat down to theirs; Mary brought her sons the milk; they were in the habit of breakfasting in that way, the boys always first.—*To the Court:* No one had access to the dairy, except herself and her daughter.—*Cross-examination resumed:* Her daughter appeared very ill on and after the 5th June; *she used to leap out of the bed, and think there were persons talking about her,* although no one was in the room; witness could not think she was in her mind; her daughter remained in bed from Friday till Tuesday evening, when she was taken, except when she used to jump out by day as well as by night.—*To Court:* Many a one said, as well as herself, that her daughter was out of her mind after being away.—*To a Juror:* She was not so attentive to her prayers or religious duties as before.—*To Court:* People blamed witness for bringing her daughter on the car with her of a Sunday to mass, from her strange manner; she did not act in that way before All-Hallows, trying to conceal herself.—*To Mr. Barlow:* She thinks that she would have minded her business better if she was not out of her mind.—*To Court:* Thinks that something was over her; she did not wear her good clothes. — *To a Juror:* Her daughter's manner reminded her of the derangement of witness's family.

Thomas Cullen, who appeared very weak and ill, examined by Mr. SAUSSE.—Mary Cullen is his sister; was taken ill after breakfast on the 5th of June last; thought that he got a bad taste on the stirabout and milk after breakfast; went out to the garden, and threw up nearly what he had made use of; after he returned, the travelling woman and her child were at breakfast; he went into a room below the kitchen; sat on the side of the bed, and run clear water out of his mouth; was greatly affected, and threw up, but not the same as the victuals; heard his brother James complain; witness washed his face; thought that he had got better; James asked him to open the window to let in the air; when he was doing so he saw John in the garden, and, on going out to John, he saw Mick lying near an ash tree in the garden; he brought in John, and laid him on the settle bed in the kitchen; went down the lane to meet a cousin who was sent for; got bad again; went into the barn and recollects nothing more: was ill for a long time after this, and is still ill; thought that his sister was not in as good spirits as before the transaction; she did her business badly, and did not speak much; she would not have as much speech when any one passed her as before; he remarked thi silence before and after she left her mother's house.—*Cross-examined* by Mr. MAHER: All the family lived upon the best of terms.

Surgeon James Furlong examined by Mr. SCOTT.—On the 5th of June last, was called in to the Cullens, of Kereight; received the summons about one o'clock in the day; it is four miles from town; arrived there at half-past two. When he first went in, saw a man lying dead on the table in the kitchen; was shown into a room above the kitchen, where he saw a man who was drawing his last breath; was brought into the kitchen again, and saw a third person, named Thomas Cullen, lying on a settle bed; he was so bad that he refused to let any thing be done for him; his eyes were suffused, his pulse high, and labouring under great mental anxiety; witness asked him to let him use the stomach-pump, in order to wash out the contents of his stomach with lime water, but he refused; witness did not press him, but administered some magnesia and hippo (ipecacuanha), which was in a short time vomited, and the patient felt relieved; afterwards he continued to use the magnesia separately; then visited prisoner [identified her]; found her in a room above the kitchen, lying in a bed with her mother, vomiting, and labouring under the same train of symptoms as her mother; she answered witness's questions perfectly correct; treated her precisely as he did the brother, and with similar results; found the mother calm, and her pulse tranquil; gave her a draught of magnesia, and told her that there was no danger of her; saw another man, named John, lying on a bed quite dead; was then shown into a field, where there was a woman lying ill in a corner of it; they called her Margaret Dempsey; she was in a very bad state, similar to the Cullens; he treated her in the same way; saw her dead next day at seven o'clock in the morning; left her alive between nine and ten o'clock the previous night; asked if he would get some of the stirabout, and was told that it was all used; he then got some of the matter vomited by Thomas Cullen, scraped off the floor in the kitchen; applied a test to it, but did not discover any poison in it; a second attempt was made by him, when he got some of the stirabout out of the pot in which it was boiled; he got about a tea cupful; tested it, and found it to contain arsenic; it was in the state of arsenious acid in the stirabout; on the second day, Dr. Goodall accompanied him to the patients; they examined them together; those living were the two women, Thomas Cullen, and a little boy; found Thomas and Mary Cullen very bad, but a little better than first day; proceeded to hold a post-mortem examination; examined the contents of the woman Dempsey's stomach, and found what they believed to be arsenic therein; attended the inquest; Dr. Goodall and witness were ordered by the Crown to re-examine the other deceased persons; they did so; and found in each of their stomachs what they believed to be arsenic.—*To Court:* Is positive that the contents of Michael's stomach contained arsenic.

Examination resumed.—On Monday last was ordered to examine the bodies; did so; had four exhumed: examined them, and sent a portion of their contents to Professor Geoghegan in Dublin to be tested; also a portion of the viscera and muscles: they were severally sealed up, labelled, and given in charge to a policeman named Kearns. Kearns, accompanied by witness, proceeded with them to Dublin, where witness saw Professor Geoghegan submit them to proper tests, and reduce the arsenic to the metallic state. Has no doubt of the administration of arsenic being the cause of the death of Michael Cullen, and the persons mentioned. —The witness proceeded to explain the chemical process:—The supposed poison is arsenious acid, or what is called white arsenic. When this is extracted from any part of the human body and brought into contact with nitrate of silver a decomposition takes place. Ammonia is first added to take up the nitric acid of the nitrate of silver. The silver is disengaged in a state of oxide, which unites with the arsenious acid and forms a yellow precipitate, which is arsenite of silver. This is one of the modes recommended by toxicologists for detecting arsenic. He (the witness) from his own experience in animal and experimental chemistry would be very reluctant—he would be exceedingly cautious in giving such positive evidence as would endanger the life of the prisoner; but having been present, and having assisted Professor Geoghegan in conducting the chemical process to a satisfactory conclusion, he had no doubt upon his mind, that the poison in this case which had caused the death of Michael was arsenic. *Cross-examined by Mr. Lynch*—Prisoner was dangerously ill.

Dr. Geoghegan examined by Mr. BARLOW—Is Professor of Forensic Medicine in the College of Surgeons of Ireland. On the 9th of June last received a box, enclosing various (seven) articles. On the 7th of July received a sealed box from Constable Kearns, which he opened in his presence. It contained part of the viscera of four persons. Examined a portion of the liver labelled Michael Cullen; ascertained the existence of arsenious acid or white arsenic in it: the quantity for the entire organ being as nearly as could be calculated two-fifths of a grain. Arsenic is transmitted, subsequent to its ingestion, to the liver, and also to other parts of the body, as the spleen and kidneys, but is more particularly deposited in the liver. Witness has detected arsenic in the liver when it could not be found in the stomach. Arsenic does not exist as a constituent of the liver, or of any other organ in the human body, although the opposite opinion has been erroneously entertained: the fallacy is now only asserted in courts of justice.

James Knox Walsh examined by Mr. Barlow.—Lives with Surgeon Croghan; is an assistant apothecary with him, and was living with him in November last. Sold six pennyworth of white arsenic on two different occasions to a person since November last. The second time was about four months from this time; thinks it was to the same person, by what she said: she said it was for killing rats the first time, and asked how it should be used. Witness told her to mix it with oatmeal. The second time witness refused her, when she reminded him, *that he sold it before, and that it had destroyed a great number of rats.* He then gave her white arsenic, and told her to use it as before. Is not able to identify the woman. *To Court*—The first quantity he sold was sufficient to destroy human life.

[A long discussion ensued between counsel on both sides, as to the legality of admitting the evidence respecting prisoner's confession, in consequence of the inducement held out by the mother. Court admitted the evidence, leaving the option to prisoner's counsel of submitting it afterwards to the opinion of the twelve judges.]

Constable Graham *examined:* Prisoner told him that she could neither get rest nor peace till he took down her confession; took it down according to the paper he held in his hand. Witness then read as follows:—

MARY CULLEN'S CONFESSION.

Mary Cullen, of Kereight, parish of Kilpatrick, barony of East Shilmalier, and county of Wexford, charged by James Graham, constable of police, on the oath of the said James Graham, with having thrown poison into the pot in which breakfast was made for her family, she having been duly warned that use may be made of every thing she said hereafter against her—Saith, that to the best of my knowledge in February or March, I went to Mr. Croghan's, in Wexford; to the best of my knowledge that is the name; I asked him if he had anything for rats, he said he had, asking me what I wanted; I said I did not know, he making answer at the same time that he did not give less than sixpenny worth. I got it and paid for it; he didn't tell me what it was, and I brought it home, and put it in an under drawer in my own room. When we had the snow about Patrick's or Lady-day, I went to Wexford again into the same shop; he looked very sharply at me, it was the same man, and asked me what I wanted; I said the same complement for the rats; he asked me did the last do good? I said yes, and he said stick to it, and he said it would banish all the rats. I returned home and put it into the drawer along with the rest, and it remained there until Thursday last. I took it out and laid it into the drawer again, and on Friday morning I took it out and I threw it into the pot; a part of it did not go in. *I wet it in a tea cup.* There was only water in the pot then. Stirabout for breakfast was afterwards made in it. I and my brothers ate of the stirabout.

Examination continued — When Mr. Tench, the magistrate, came, witness told him what he had done; she said that what witness had taken down was perfectly true; Mr. Tench also cautioned her not to criminate herself.

Cross-examined by Mr. Lynch—This is in his own hand-writing; took it down in pencilling, and transcribed it; tore the original when he copied it; never took down a confession before; took the copy the same evening in his own room; no person was with him; it was then he tore it; on his oath what he took down is word for word with what she told him, and word for word with what was in the pencilling; he swore informations before Mr. Tench and Mr. Le Hunte; the latter drew up the informations.

Samuel Tench, J.P., examined by Mr. Sausse—Went to the house of the Cullens on the 5th of June, and subsequently on the 9th. Witness then read the following as her confession taken down by Mr. Le Hunte:—

I, Mary Cullen, of Garrywilliam, first bought poison about the 1st of January, 1846; went to Mr. Croghan's, asked if he had anything to poison rats; he said he would not give less than sixpence worth; I got it and paid for it, brought it home, and put it in the drawer of my bed-room; then, about the middle of March, went again to the same shop, and asked for the same; he asked for what, for the same as I got before to poison the rats, stick to it and it will poison all the rats in the house. I put it in the drawer along with the rest, it remained there until last Thursday, the 4th of June; took it out on Thursday, and put it in again. On Friday morning, the 5th of June, took it out of it and wet it in a teacup; there was water in the pot to make stirabout for my brothers' breakfast, and ate some of the stirabout myself. Mr. Croghan did not say what he gave her to poison the rats.

To Court—Graham read, in witness's hearing, the confession that he had taken down; they only took down the substance;

she said it was in consequence of having a quarrel with her brothers that she had done what she did.

[Court said that as this was very material evidence, and not in her written confession, he should hope that the Crown would not press it. Counsel for the Crown did not persevere]. To Mr. Maher—She was debating whether she would throw the poison into the fire or into the pot; but when she heard her mother coming, she threw it into the pot.

Dr. Boxwell examined by Mr. Sausse—Is attending physician on the gaol; saw prisoner daily since her committal; cannot say that he considers her of unsound mind from her appearance in the gaol; she has been a steady, proper, well-conducted prisoner. To Mr. Mahier—Has seen a good many cases of insanity; never saw prisoner before her committal; there are cases of insanity which only occasionally manifest themselves, and at other times the patients are quite sane and collected; this is called moral insanity.

Mr. Lynch, for the defence:—The atrocity which led to the commission of the act, had it been the influencing motive of a *sane* person, would have manifested itself previously, and could *not have been concealed.* She, however, had been always kind and affectionate. She could have had no animosity against the beggar-woman, who also died by her act. She also took the poison herself. There existed a strain of insanity in the family (?), (brother, uncle, and cousin). The testimonials of prisoner's mother shew her unsound state of mind (the observation of the *gossoon* as to her being with child); her disinclination to speak, her change of dress, afford evidence of this effect. This state of mind continued from last Hallow-eve. The medical witness (Dr. Boxwell) did not deny that insanity comes on at intervals. Persons in this state of mind, when placed in new circumstances and under the visitation of strangers, often do not seem insane. The doctor did not apply any test, but only judged of her by her conduct, which he considered proper and good: hence the previous extravagance of her conduct should be accounted evidence of her insanity at the time. There was no evidence against her except her own confession. The state of her mind at that time must have been disturbed, as evidenced by her mother's acount of her delirium during her illness. At the time of her *purchasing* the poison, she had no motive for destroying her family, but may have been contemplating suicide, as seems probable from having *twice purchased* poison. On both occasions she put the poison into a drawer, to which various persons may have had access. She did not use the arsenic at the *time of quarrel*, but *after the reconciliation*. On criminal trials, motives are sought to be proved.

Judge's Charge (Lefroy, B.):—In the indictment, the prisoner is charged with malice prepense. The first question was, was the act done and death caused by it? In law, every one is presumed to know the consequences of their own acts. Thus any one throwing poison into a pot, would be presumed legally to have known its result. It is, however, open to the prisoner to repel the presumption of law by suitable means. The defence being of that character, this is the difficult point for the jury—whether the prisoner, *at the time of committing the act, was aware of what she was doing.* The defence on this ground must be sufficient; no degree of atrocity in the act, or of strangeness of its nature (or of manner of prisoner?) would suffice to prove *insanity*, but these, if combined with other circumstances, may suffice to do so. The inquiry must arise, is there any selfish motive, or of revenge, or is there express malice? It does not suffice, on the part of the defence, to insinuate a doubt; the onus of proving insanity rests with the prisoner; the chief evidence on that head is that of her mother, both as to her conduct and the family tendency. She says she left her house twice; the last time at night. Insanity may first shew itself by an impression on the part of the subject of it, that people view them with aversion—(her conduct as to the aspersion on her character, her mode of going to chapel, &c.). This state continued for some time. Prisoner partook of the food herself. Definition of murder in one of the old law books, "*quod clam nullo vidente,*" &c. If there was no *delusion* in this case there was *deliberation.* There is the curious circumstance of purchasing the poison *twice.* The jury must consider whether there was evidence of design, and whether, if there were design, she would not have resorted to some occasion on which there would be less ground of suspicion than that on which she and her *mother* only were present (and the former having made the food). The proof, however, of her intending to take away her own life with that of the other, would form no palliation, unless on the ground of insanity. The prisoner exhibited delusions during a great part of her illness previous to her arrest. The question, then, for the jury is, whether there is evidence of previous insanity. The act she committed appears either to have awakened her from a delusion or aroused her *conscience*; if the latter, of course she is not excusable.

The Jury, after an absence of twenty minutes, returned a verdict of *acquittal*, on the ground that the prisoner was of unsound mind.

She is to be confined for life in a Lunatic Asylum.

⁂ The evidence of insanity in this case appears to have been weak, and but for the facts relating to a change of character deposed to by the mother, the plea could hardly have been entertained. The absence of any clear motive for poisoning so many persons, and the fact that the deceased had herself partaken of the poisoned food, appear to have had considerable weight with the jury, who are always willing to find some ground for avoiding, if possible, conviction for a crime which entails the punishment of death. Admitting to their fullest extent the facts urged by counsel in favour of the plea of insanity, there is not the least evidence to show, in the crime itself, or in the mode of its perpetration, that utter indifference to detection manifested by really insane persons. Such individuals rarely attempt murder by poison: but, as a case of insanity, we think this stands alone in the following facts:—that the poison was purchased *twice* at a long interval between; and that its properties were *well known*, because the pretence was that it was for the purpose of *poisoning rats*. On the second occasion the chemist refused to sell the poison, but the prisoner reminded him that he had sold arsenic to her before, and that it had destroyed a great number of rats. It was therefore procured under *false pretences*, and with a full knowledge of its destructive properties. It may be said that the prisoner was rational when she procured the arsenic, but insane when she administered it, and the latter act only constituted the crime with which she was charged. But we think the whole conduct of the prisoner requires to be closely regarded, not merely in procuring the means of death, but in the mode of using them; and an argument of this kind has a double application, for the facts relied upon by counsel to establish insanity, were observed long before the time at which the offence was committed. The evidence of the mother shews that great art and cunning were manifested by the prisoner in her mode of mixing the poison with the food: in short, had some *motive* been clearly brought to light, the acts of the prisoner would have admitted of no other explanation than that of being prompted by a rational but depraved mind. We are not among those who consider that all crime proceeds from a degree of insanity which should create irresponsibility for criminal offences; nor can we admit it to be consistent with the security of society, that the crime of murder should find so ready an apology as it now does, in the assumed existence of a disordered state of mind.

The age of the female, and the fact that there was no disturbance in her uterine functions, took this out of that class of cases in which young females have been occasionally held irresponsible for their acts. The gentleman to whom we are indebted for the particulars of the case states that he saw the prisoner after the trial, in the gaol, and conversed with her. He felt persuaded that whatever might be thought of her former state of mind, she was then perfectly *compos mentis*. She told him that she bought the poison for the purpose of committing suicide, in consequence of the reports which prevailed as to her character. She stated that she mislaid the quantity of arsenic which she first purchased, and hence applied for more; and that she intended to throw, and thought she had thrown, the poison into the fire,—a statement which is quite adverse to her own confession, and irreconcileable with the facts deposed to by her mother. According to the verdict of the jury, we must suppose that by wetting the arsenic with water, and taking the opportunity of her mother's temporary absence to throw it into the pot in which the family breakfast was to be made,—the prisoner was not aware of what she was doing,—she did not know arsenic was a poison,—that it would destroy either rats or human beings,—and consequently she must have supposed that there was nothing wrong in mixing it with food of which her family were shortly to partake! The whole of the evidence renders it difficult for us to adopt this conclusion; and we believe it would be difficult to find another case, in which insanity has been so readily admitted as a plea, on a charge of murder by poison.

The punishment of death has been here commuted, practically speaking for confinement in a lunatic asylum for life, with probably that degree of sanity about the prisoner to render this a most severe punishment.

In the purely medical part of the case, among the facts worthy of notice are the rapidity with which death took place in one instance,—the rapidity with which the conjunctivæ were affected in another case,—and the detection of the poison in the liver. By the detection of arsenic in this organ, it was clearly shewn that this poison was the cause of death; for some doubt might have been thrown on the correctness of the previous analyses.

INFLUENCE OF ALCOHOL UPON THE SECRETION OF URINE.

M. **Bouchardat** has found from his experiments that one effect of the injection of large quantities of alcoholic liquids, is to diminish the quantity of urine passed during the twenty-four hours. There is at the same time a diminution in the proportion of urea, but an increase of uric acid.

Selections from Journals.

LATION OF THE FUMES OF NITRATE POTASS IN SPASMODIC ASTHMA.

END of Mr. James B. Harrison's, to spasmodic asthma, having seen in paper, inhalation of the fumes of of potass recommended in that com- was induced to try it, which he did e most perfect success. He made a piece of blotting paper, about the f his hand, dipped in a saturated n of the nitrate of potass, and after- dried. This was placed on a common and being ignited, the fumes were y sensible in the room. He described ation "as cleaning the passages and ly opening the air-tubes." He said e respiratory murmur became louder s stridulous under its continued e. The effect was always produced t a quarter of an hour, and though used the same remedy nearly twenty he had never been disappointed in lt.—*Lancet*.

A correspondent of the New York l Gazette has derived essential , in severe attacks of asthma, from the remedy, and has prescribed it for patients with equal success. He ends that, at the approach of a m, the vapour should be inhaled by g it in the room, or smoking it in a -pipe.

Correspondence.

OSIS OF DISEASES OF THE HEART.

R. G. GOLDING presents his compli- to the Editor of the MEDICAL GA- , and is desirous of correcting a eption that the Surgeon of the Regiment (a correspondent to his) has fallen into, in commenting in ek's number on a paper written by olding, and inserted on the 12th of f this year. The correspondent in n seems not to be aware of the motive ch the paper was written, but appears ur under the conviction, that Dr. g advanced as his own discovery the tance of a diastolic bruit between the es of the third and fourth ribs on the le being pathognomonic of aortic r disease, as well as of a systolic one n the fifth and sixth or sixth and ribs (if the heart be much enlarged), ral valvular affection. To remove n idea, Dr. Golding wishes to refer itor's correspondent to the title of er, in which nothing is *sought to be proved* beyond the occasional existence over the base of the heart of a persistent and continuous bruit, neither exclusively diastolic nor systolic, but accompanying the sounds of the heart; and that, for its consummation, a permanent patency of both mitral and aortic orifices must exist.

In detailing as proof a case occurring under his own observation, Dr. Golding set out with the assurance that the regions mentioned by the correspondent to the MEDICAL GAZETTE, were those always chosen as best elucidative of the condition of aortic and mitral valves respectively when in a morbid state. Dr. Golding is sorry to trouble the Editor with these remarks, but is sure that he will be excused, as Dr. Golding feels that a slight explanation will remove all doubts from the Editor's correspondent as to any monopoly by Dr. Golding of a discovery apparently made by the correspondent, and for which science is deeply indebted.

King William Street, West Strand,
June 25, 1846.

ON THE TREATMENT OF CELLULAR DROPSY.

RESPECTED FRIEND,—If the following case be worthy of a place in the MEDICAL GAZETTE, the writer, a medical man, will be obliged by having it inserted.

I became the subject of cellular dropsy, and my medical friends commenced treating it with purgatives, diuretics, and the active use of mercury. In about three weeks the accumulation ceased, and as I was much reduced in strength, a tonic plan was had recourse to. The dropsical symptoms returned in a short time, with but little increase of strength. The same plan was adopted, but not with the same effect, for the debility rapidly increased, and the cellular membrane continued to fill, and the cavities also contained fluid. My life was considered in imminent danger, and as I was so weak as not to be able to turn over in bed without assistance, I resolved to try an opposite plan of treatment.

My diet consisted of the strongest animal jellies and soups, allowing my stomach to be the guide as to quantity and frequency of repetition. My beverage was sound port wine, in glass doses, repeated according to the effect on my head and heart. At the end of three days my legs were lessened in size so much as to be observed by my nurse. The same plan of treatment was continued, until every symptom of dropsy had disappeared: and, what is very remarkable, my inclination for stimuli and highly nutritive food left me, and by degrees I lowered the quantity of both until I subsisted wholly on barley gruel and water. After a while better food was called for.

This case appears to me to suggest the

following pathological remarks:—As long as the heart and arteries continue to have power to carry on the round of circulation, active remedies, similar to those first had recourse to in my case, may be used to advantage; but when the heart and arteries cease to have power to carry on the round of circulation, venous congestion will be the consequence, and effusion of serum will continue to increase, until death puts an end to a miserable existence.

JOHN WINSTONE.

Charterhouse Square.

Medical Intelligence.

ANNIVERSARY MEETING OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

THE fourteenth Anniversary Meeting of this Association was held at Norwich on the 19th and 20th ult. There was a large assembly of medical practitioners from the metropolis and all parts of England.

Mr. J. G. Crosse, who presided at the meeting, delivered an address, characterized by great ability and good sense. We regret that we cannot print it entire. We must, however, find room for some extracts, which have a universal application, and which may be read with profit by the rising members of the profession. In reference to medical legislation, Mr. Crosse observed:—

"As a science to be studied for the public good, legislation on medical matters is entitled to every consideration; until recently, it received less attention from the Executive in this, than in almost any other civilized country in the world, although the profession have been agitating the subject for nearly forty years to my knowledge, but most warmly in the last three or four years; and after all, what are the conclusions most generally arrived at and avowed by the greater part of thinking and experienced men? A few general principles are what they agree upon; and foremost may be placed 'a general registration of all the legally qualified, with annual publication of the registry.' The next are uniformity of education and community of privilege in each grade throughout the empire—principles which will be more appreciated every year, by the increasing intercourse which rapid and easy transit is sure to produce, rendering the present incongruities more and more apparent, until they will be deemed too absurd to be longer maintained, and we shall see the profession in England, Scotland, and Ireland, united into one brotherhood. It is not a little extraordinary that 'the protection to the public by penal laws against the unqualified' seems not to be so generally admitted as a necessary principle of legislation. To carry out the principles I have enumerated would be, in my humble view, a great boon to the public, and not less so to the profession; and all minor details are scarcely worthy to be regarded as immediately essential; particularly at the risk of our getting nothing done: in grasping at the shadow we may loose hold of the substance.

"But there is one truth worthy to be made prominent, and to be frequently placed before us: sound legislation will benefit, but the influence, respectability, and high *status* of the profession in this country, must be secured and maintained by very different means—*by knowledge honestly applied—by integrity, assiduity, kindness—by the absence of all contentious, narrow, over-selfish, and grovelling passions—by liberality and forbarance towards each other*—and I may be permitted, I am sure, before the present company to add, that the exercise of all these virtues which I have enumerated, and their results, will be greatly promoted by social and scientific intercourse with our brethren, such as the Provincial, above all other associations in the empire, is most calculated to foster and promote.

* * * *

"That our ancestors knew a great deal is unquestionable, even much that has been forgotten and passed away; but it was known to very few. The striking characteristic of the present day is, that what is worth knowing is known to a great many, and is accessible to the whole profession. It is on this more extensive diffusion of knowledge, that we may justly claim superiority over our ancestors; the increased and yearly increasing proportion of well educated members of our profession, and the diminished numbers of the grossly ignorant, are indications of our improved condition, quite as much as the advanced degree of our science. New and brilliant discoveries, often more imaginary than real, more vaunted than prized, are as the pinnacle or spire of a fine edifice, attracting much attention, whilst its basement and interior correspond to that well diffused sound practical knowledge, which is of every day's application, and can now be found in every part of our favoured country. That the diffusion of such useful knowledge is promoted yearly by the meetings of this Association can scarcely be denied; let us endeavour that this and every future occasion shall be an improvement upon the past, and let each of us remember that what takes place in this public room, may be considered as transpiring before the medical community, as well as before the criticising spirits of the day, who take so much better care over our interests than we seem capable of doing for ourselves.

It must necessarily happen that a vast jority of our profession can aspire to no ater merit than that of collecting facts, r which, however, they deserve approval, even commendation, if their facts be ue and *real*; for it has been remarked, th some justness, that there are as many e facts as false theories. Mere facts, wever closely connected with, are as dis- ct from science, as colours on the palette om a beautiful picture worked out by the lents of an artist. In medical science, cts are the materials for a-building, and quire to be converted by the operation of minds of the more gifted amongst us, to ir proper object, the awakening of philo- phical ideas, and the constructing of a oretical system for our guidance. But reverse of the inductive is too commonly course pursued, even in these enlightened ys; theories are first formed, and the cts are made to come afterwards, suitable the preconceived speculations; and it is ancholy to reflect, that when once a theory taken possession of the mind, it cannot displaced without offering another in its ad, often as delusive as its predecessor. rely, in these modern times, has medical ence been beset with more bewildering ories of the day than at present; what e man honestly espouses, another ridicules despises, and in the collision thus ing is found the wonted stimulus to ntal activity; but that the infinitesimal llies of homoeopathy, the drolleries and ceptions of mesmerism, or the more gerous excesses of hydropathy, can ever g persist, or any one of them be brought the position of a science worthy of general pport, will I trust scarcely be admitted the present enlightened assembly. Theo- are unavoidable, and where they are nestly embraced and used, to a certain tent desirable, and may even prove useful, were the great body of the profession— e any preponderating number of this ge association to become captivated with y delusive doctrine, and to merge into fanaticism of the day, we should be iven back to the dark ages of our history, ominated by a learned professor, the tionary period of the inductive sciences, en experimenters were replaced by com- ntators, criticism took the place of induc- , and instead of great discoveries we d learned men.'

"One of the possible advantages which y arise from homoeopathy is, that it will ord opportunity for observing the natural urse of diseases, and be a check to over- tive treatment in doubtful cases. In our cult calling, whenever art does violence nature, the apparent good is as an arti- cial fountain, that can be kept up *only for* time; the more *you consult the restorative powers of the constitution, the more surely will progress towards recovery, once commenced, flow in a smooth current, like a natural rivulet, till health is restored.*"

The PRESIDENT called upon the Secretary, Dr. STREETEN, to read the Report of the Council. It commenced by congratulating the members on the continued prosperity of the Association, and stated the number of members on the list to be 1856. The gross amount of the receipts and expenditure for the past year was as follows:—Balance brought forward, £78. 5s. 10½d. Receipts, £1789. 13s. 8d. Total, £1867. 19s. 6½d. Deduct expenditure, £1754. 12s. 0½d.—Balance in hand, £113. 7s. 6d.

At the evening meeting several papers on interesting medical subjects were read; among others, one by Mr. FIRTH, of Norwich, on poisoning by arsenic, founded on the cases at Happisburgh. Having detailed many of the particulars already given to the public, he proceeded to relate several experiments he had since made to discover arsenic in various soils. He had found arsenic not only in that part of the soil in the church-yard at Happisburgh where interments took place, but also in another part of the ground which had never been opened for the reception of the dead. He had also analysed some soil taken from Wayford Wood, from St. Etheldred's church-yard, and other places, in all of which he had detected arsenic. He at first thought it might proceed from the chalk, which was so abundant in the county, but he could not find it in that substance. Neither could it have been derived from arsenic used in the washing of sheep; nor did he believe it existed in bones. Mr. Firth stated that he was still pursuing his experiments on the subject, and that he would show to any gentleman present the arsenic he had obtained. The process which he employed was that of Reinsch; converting the metallic arsenic deposited on the copper to the state of arsenious acid, and then applying the usual liquid tests.

The PRESIDENT considered this a very important communication; they were all aware that information on this subject had been dispersed throughout the country in a very imperfect form; even Sir James Graham had made statements at variance with the facts.

Mr. STALLARD, of Leicester, then made a few observations on some points in Mr. Firth's communication just read. He had found that in the examination of organic fluids, free chlorine in the acid produced a chloride of copper, which was sublimed in heating the copper, and it might be mistaken for arsenic. The second point was as to the satisfaction to be obtained from microscopic examinations, which, though conclusive to the medical witness, were not so to ordinary people. Not long since, Mr. Justice Patteson had laid great stress on the metallic arsenic being exhibited at the trial, and it would be always advisable to present it in a metallic form, for, in courts of justice, the judges at all times insist much on the arsenic being reduced to the metallic state.

This anniversary meeting appears to have given great satisfaction to the members.

The anniversary meeting for 1847 will be held at Derby: Dr. Highgate, President.

ROYAL COLLEGE OF CHEMISTRY.

The annual general meeting of the members of this College took place on Monday last at 16, Hanover Square: B. B. Cabbell, Esq. in the chair. The Chairman addressed the members in an appropriate speech, calling their attention to the fact, that the Members of Council who had been appointed for a year at the meeting held on the 29th July, 1845, now appeared before the members of the College to render an account of their proceedings, and to surrender into their hands the trust which had been reposed in them for the management of the affairs of the Institution.

The report of a Committee appointed by the Council was read by Mr. Dalrymple. It stated, that the prospects of the Institution were most satisfactory, that there had been a progressive increase in the amount of the subscriptions and donations, and that the number of pupils had also increased in each session; but it was obvious that until the opening of the new laboratories the experiment of founding an institution of this kind could not be fairly tried. These laboratories were already so far advanced that it was expected they would be open for students early in the October session. The Committee had to report that the funds of the College were in a very satisfactory state. Upwards of five thousand pounds had been already received in subscriptions and donations; but the greater part of this sum had been necessarily expended in preliminary expenses. The College had, however, numerous warm supporters among noblemen, scientific men, and the wealthy manufacturers of the country; and there was every reason to believe that the number of these would increase as the benefits and advantages of such an institution became known to the public. It was further announced that Dr. Gardner had sent in his resignation of the office of Secretary, and that this had been accepted by the Council.

Various resolutions were then moved by different members. The lists of Vice-Presidents and Members of Council proposed by the Committee, were accepted unanimously by the members, and a power conferred on the Council of appointing dismissing those officers who might required to carry on the business of College. Among the resolutions was proposed by Dr. Reid, to the effect, that College should grant a diploma to those had manifested good conduct, and had ceived their chemical education within walls. This resolution met, as it deserv general approbation, and was carried una mously.

CAVENDISH SOCIETY.

A Society has recently been founded the purpose of supplying at a cheap rate its members, standard works on Chemi Science. The names of the members Council furnish a sufficient pledge that objects of such a Society will be fully fairly carried out; and with this convict we do not hesitate to recommend those our readers who take an interest in advance of chemical science and chemi philosophy, to enrol themselves among members.

President.—Thomas Graham, Esq.

Council.—A. Aikin, Esq., D. T. Anst Esq., J. Bell, Esq., W. T. Brande, Es J. T. Cooper, Esq., M. Faraday, D.C. G. Fownes, Esq., Ph. D., A. W. Hofma Esq. Ph. D., Percival Johnson, Esq., A. Miller, M.D., J. Pereira, M.D., Phillips, Esq., L. Playfair, Esq. Ph. D., Redwood, Esq., G. O. Rees, M.D., E. Teschemacher.

Treasurer.—H. B. Leeson, M.D. Thomas's Hospital, Southwark.

Honorary Secretaries.—Robert Wari ton, Apothecaries' Hall, Blackfriars, G. Day, M.D. 3, Southwick Street, Hyde Pa

1. The object of the Society is the p motion of chemical science by the translat and publication of works and papers chemistry and its applications to agricultu manufactures, mineralogy, medicine, pharmacy. 2. Every subscriber of C Guinea annually to be considered a mem of the Society, and to be entitled to copy of every book published by the Soci during the year to which his subscript relates; and no member shall incur liability beyond the annual subscripti 3. The number of copies of the Societ publications shall, unless otherwise direc by the Council, be limited to the number actual subscribers who shall have b enrolled, and paid their subscriptions. The Society will not commence its publi tions until the number of subscribers sh amount to fifteen hundred.

Gmelin's Inorganic Chemistry, compl in three large volumes 8vo. will be pu lished, and given in return for the first yea subscription.

The Council contemplate a stated publi- tion of three volumes annually, and with- t pledging themselves to publish all the llowing works, present the names of some hich have been brought before them for nsideration :—

1. A volume of recent Memoirs and racts in Chemical Philosophy. 2. The fe and Works of Cavendish. 3. A volume recent Memoirs in Animal and Vegetable ysiology. 4. Rammelsberg's Mineralogy. Kopp's History of Chemistry. 6. Gei- r's Pharmacy. 7. Runge's Chemistry of yeing and Calico Printing. 8. G. Rose's rystallography.

Periodical reports on the various applica- ns of chemistry to the arts, manufactures, riculture, medicine, &c. are also in con- mplation.

STATUE TO GEOFFROY ST.-HILAIRE.

COMMITTEE has been appointed for the rpose of procuring subscriptions in order erect a statue to this celebrated natu- list and philosopher in his native town. eoffroy St.-Hilaire, who has acquired a uropean reputation, was appointed by the ational Convention, in 1793, professor of oology in the Museum of Natural History. t has been chiefly under his auspices, uring the last fifty years, that the splendid llection of mammalia and birds has been ade. In 1798, he was one of the scientific en who accompanied the French army into gypt. In 1807, he was created by Napo- on a knight of the Legion of Honour. In 815 he represented his native town in the hamber of Deputies; but preferring science o politics, he soon resigned this post. In ore recent times, the high character which e has acquired by his researches in many ranches of natural science, must be well nown to our readers. We need hardly bserve that this proposition to erect a memorial to him, has been received with the reatest enthusiasm in his native country.

CASES OF POISONING BY BELLADONNA.

We last week gave a short account of two cases of poisoning from the berries of the Atropa belladonna. The facts are of some public interest; since, although there have been only two deaths, a large number of persons have suffered severely from partaking of the berries of this plant, which had been sold to them by an old countryman as wholesome fruit. We do not remember to have met with a case where a greater degree of culpable recklessness has been displayed than in this instance; for it now appears that the prisoner persisted in selling the berries after he had been warned of their poisonous nature. The facts deserve and will no doubt receive a full investigation at the Central Criminal Court.

Cases of poisoning by belladonna are not very common; and we therefore subjoin the medical evidence given before the magistrate relative to the symptoms, treatment, and post-mortem appearances in the two which proved fatal.

Mr. William Prophet, surgeon, of Church-lane, Whitechapel, was called in to see the deceased, Parker, and his wife, on the afternoon of Sunday, the 16th inst. He found Mr. Parker in a comatose state, and labouring under severe convulsions of the extremities and face; the pupils of the deceased's eyes were dilated, and were immovable by the application of strong light to the eyes. He immediately suspected the deceased had taken some vegetable poison, and from the symptoms he suspected it to be deadly nightshade. He ordered cold applications to the head, and returned to his surgery, and sent emetics with directions how they were to be given. He also sent his assistant to bleed the patient. About three-quarters of an hour afterwards he again saw Mr. Parker, and administered some medicine himself, and also tickled his throat with a feather, to produce vomiting. The deceased brought up something from his stomach, and upon examining it, berries of the deadly nightshade were discovered. He gave the deceased other medicine, and again tickled his throat with a feather, which caused him to vomit a little more. After that his patient got a little more conscious. He gave directions that the patient should be kept on the move and not allowed to go to sleep; and returned to his house for the purpose of dispensing some more medicine, and again went back to the deceased, with whom he remained until 8 o'clock in the evening, when he sent him to the London Hospital. Mrs. Parker was affected in the same way, though not to the same extent, and she was not comatose. He saw the body of Parker after death, and had no doubt he died from the effects of poison—the berries of the Atropa belladonna.

The only account which we have of the symptoms as they occurred in the child Jones is contained in the evidence of the father:—

Samuel Jones, of No. 21, New Montague-street, Spitalfields, recollected on Sunday, the 16th day of August, going to the house of the deceased Parker, with his child, since dead, for the purpose of settling a small account. Parker and his wife were eating a pie, and they gave his child some of it. He asked Mrs. Parker if she knew what she was giving to the child? to which she replied, that it was a very nice pie, and was made of forest fruit. He told her she ought to be very careful what forest fruit she ate, for sometimes it was poisonous. He soon afterwards left the beer-shop with his child, and returned to his home. About 10 minutes afterwards the face of his child assumed a most unnatural redness, and he accused his wife with having frightened the child or beaten it, while he was gone for his beer. His wife took the child to a doctor, and obtained a powder, which she gave him. The child then became sick, and vomited a little, and went to sleep. About an hour afterwards the little sufferer awoke in great agony, and became raving mad. He then took him in his arms to Dr. Major, in Whitechapel, whose assistant said he would have fits, and directed him to put the child in a warm bath, and afterwards cover him up and put him to bed. The application of the warm bath was not attended with any good, and he went back to the doctor to consult him again. As he passed by the beer-shop he saw Mrs. Yates, and made her acquainted with the illness of his child. He was then informed that Mr. and Mrs. Parker were also very ill, and that they were very anxious about the child, and they feared, as it had eaten some of the pie, it was poisoned. He fetched the doctor to his house, and he remained some time. After he had departed, a gentleman from the hospital called upon him, and by his directions he took the child there, where it died on the following day.

The evidence of Mr. Day completes the medical history of these cases :—

Mr. J. C. Day said he was acting apothecary at the London Hospital, on the 16th instant, and saw the deceased, Parker, between the hours of 8 and 9 o'clock in the receiving-room. He was then in a state of insensibility, and quite unable to stand. On seating him upon a sofa his head fell on his breast, his face was flushed, his lips and cheeks rather swollen, and the pupils of the eyes remarkably dilated, which was one of the peculiar characteristics of the poison called belladonna. The pulse was very rapid, and the hands of the patient were moving about unconsciously, as if catching at imaginary objects. That was another characteristic of the poison. He immediately ordered the stomach pump to be applied, and after two or three injections of sulphate of zinc and mustard, the deceased vomited very freely, and brought up a mass of meat and vegetables, with about twenty berries of the belladonna mixed with it. After that he poured cold water on the man's head, for the purpose of arousing him from a state of insensibility. During that operation he struggled violently, and resisted all the efforts to hold him, and was quite outrageous. The treatment, however, was persevered in for some time, and he was at last ordered to bed. As soon as the patient was placed in bed he was wrapped in warm blankets. Five drops of croton oil and
other medicines and injections were adm
nistered. About an hour after, they op
rated very freely indeed, and the bow
were thoroughly cleaned out. After t
medicine had operated, the unfortunate m
laid down and seemed more composed, b
was continually catching at imaginary objec
in the way before described, and moving h
hands before him. The pupils of his ey
continued to be dilated, and the pulse ve
rapid. About 2 o'clock in the morning t
deceased began to be very restless a
troublesome, and was very violent, fr
quently getting out of bed, acting wildl
and talking incoherently about his busine
He was at last confined to his bed by mea
of a jack towel. At 6 o'clock he becam
more calm, and gradually fell off to sle
again, and laid in that state until 5 o'cloc
when an unfavourable change took plac
his breath became heavy, and his face a
lips rather blanched. One of the physicia
of the hospital was consulted, and eve
thing possible was done for him. It w
found that he was rapidly sinking, his pul
was very rapid, the skin pungently hot, a
his breathing laborious. He died about
o'clock in the morning.—The witness th
proceeded to state that he first saw t
child Jones on Sunday night, the 16th,
10 o'clock, and he was then in a ve
excited state. His hands were movi
rapidly, as if catching at objects, just
was the case with Parker. The very sam
symptoms affected three others who we
brought into the hospital after eating berri
of the deadly nightshade, and who h
fortunately recovered. The pupils of t
child's eyes were greatly dilated. T
witness then described the treatment a
symptoms, (almost a repetition of what
before stated in Parker's case,) and said t
child died about 6 o'clock on the evenin
following its admission. About an ho
before its death the pulse was amazing
rapid, 180 or 190 per minute. The arteri
of the neck throbbed most violently; t
skin was pungently hot; and there was
lividity about the eyes. Mr. Day ne
proceeded to state that he had made
post-mortem examination in both case
The appearances were very much alik
excepting in one respect. The heart of t
child was spotted with red spots over i
surface, and was very nearly empty
blood. The heart of Parker was not spotte
but both sides of it were nearly full of blac
fluid blood. The blood in both cases w
black and quite fluid, not what might hav
been expected from the operation of such
poison. In his opinion both persons die
from the specific operation of the poiso
belladonna on the nervous system. He ha
examined the remains of the pie delivere
to him by the police-sergeant, and had a

hesitation in saying that it contained berries of the atropa belladonna, or deadly nightshade.

It is clear from this evidence, that had active treatment, in the shape of emetics and purgatives, been employed soon after the commencement of the symptoms, there would have been a good chance of recovery in both cases. The case of the child Jones appears to have been in the first instance completely mistaken.

USE OF THE BLACK OXIDE OF MERCURY IN THE VOMITING OF PREGNANCY.

M. Stackler has announced that he has found the black oxide of mercury a most useful medicine for removing the obstinate vomiting which sometimes occurs in females during pregnancy. The vomiting was checked in two cases of unusual severity, by doses of the oxide, equal to five centigrammes daily (= 0·77 grains). No unpleasant effects were observed to follow the use of the medicine. There was no salivation. Doctor Jouger has found the oxide equally beneficial in hysteric convulsions and in cases of uterine irritation.

SUBNITRATE OF BISMUTH IN GASTRALGIA.

Dr. Bertini, of Turin, has lately employed this medicine in numerous cases of gastralgia, beginning with a dose of five centigrammes (= 0·77 grains), and gradually raising it to twenty centigrammes (= 3·08 grains.) It was mixed with calcined magnesia, and given three or four times a day. In most instances the neuralgic pains disappeared under the use of this medicine; and in cases where the gastralgia appeared to be connected with organic disease, the symptoms were always much alleviated.

BLOOD AN ANTIDOTE TO ARSENIC.

M. Apoiger has inferred from certain experiments that there is a strong affinity between arsenious acid and blood; and that these bodies chemically unite even in the cavity of the living stomach.

A dog was kept for sixteen hours without food. At noon he was made to swallow 15 centigrammes (= 2·3 grains) of arsenic, and in a quarter of an hour afterwards 560 grammes (17 oz.) of fresh calf's blood. The animal experienced tremors, thirst, nausea, and depression; but there was neither vomiting nor purging, nor was any urine passed.

In three days the same dog was dosed with 30 centigrammes (= 4·6 grains) of arsenic; and in about twelve minutes, he was made to swallow 375 grammes (11½ oz.) of blood—with a like favourable result. In the evening, the dog was free from any abnormal symptoms. On the fifth day, 45 centigrammes (= about 7 grains) of arsenic were given to the animal immediately, and afterwards 275 grammes of blood (8½ oz.) The results were equally satisfactory, and in 24 hours a *pterygium* of the right eye, from which the dog had previously suffered, entirely disappeared! On the seventh day, the same unfortunate dog being again selected, M. Apoiger administered 60 centigrammes (= 9¼ grains) of arsenic, and 250 grammes of blood (about 8 oz.) The dog perspired (?) to such a degree that it appeared as if it had been taken out of water. The other symptoms from which it suffered, were purging, urination, and hoarseness! On the ninth day, 90 centigrammes (= nearly 14 grains) of arsenic were given, and 180 grammes of blood (about 5½ oz.) In addition to the above symptoms, the dog suffered from convulsions and partial paralysis of the legs. Towards the close of the day, however, they all disappeared. No other experiments were performed, and the animal perfectly recovered. M. Apoiger subsequently killed it for the benefit of science; and found the stomach and intestines *inflamed*, and the blood in a gelatinous state. On a chemical analysis, 125 milligrammes (= nearly 2 grains) of arsenic were obtained from the blood, but only 87 milligrammes (= 1·3 grains) from the brain.

⁂ Such are the results of these ingenious experiments as they are reported in the *Gazette des Hôpitaux*. Admitting that this dog did not possess a *Mithridatic* constitution, there is something remarkable in its having resisted five successive attempts to poison it at very short intervals. The account of the post-mortem appearances renders it somewhat doubtful whether the dog had actually recovered, as M. Apoiger alleged: and it is a new fact (?) in toxicology, that so large a quantity of arsenic may be extracted in ponderable quantities from the blood and brains of animals which have *recovered* from the effects of this poison! Admitting that there was no fallacy in the experiments, we think M. Apoiger would have some difficulty in persuading patients to swallow large quantities of fresh blood as a problematical antidote in poisoning by arsenic; and he certainly has not done himself justice in his mode of stating the results of his discovery; for his experiments show as conclusively that a mixture of arsenic and blood will cure a *pterygium* without endangering life, as that large quantities of fresh blood will combine with and neutralise the poisonous effects of small doses of arsenic!

ON THE DIGESTION AND ASSIMILATION OF FOOD.

According to M. Mialhe, the gastric juice is composed principally of two bodies—*acid* and *ferment*,—the office of the former being that of increasing the bulk (by imbibition), hydrating and preparing the substances, which are to undergo digestion; while that of the latter, to which the names of pepsine, chymosine, and gasterase, have been given, is to cause a transformation of the albuminous matters which have been taken as food. The diastase furnished by the salivary glands, — a principle entirely distinct from pepsine, serves to bring about the transformation of amylaceous substances. The product of the transformation of albuminous matters is *albuminose*, a body which, like *glucose*, is necessary to assimilation and nutrition.

Under the influence of the two ferments, pepsine and diastase, amylaceous and albuminous articles of food may be simultaneously digested; and in this double digestion three distinct periods are recognisable: 1. Disintegration and hydration of the food: 2. Production of a transitory compound, *chyme*, for albuminoidal, and *dextrine* for amylaceous articles of food: 3. Conversion of this compound into two highly soluble substances adapted for assimilation and nutrition, and transmissible throughout the system. One of these is *glucose*, the ultimate product of amylaceous matters; the other is *albuminose*, the product of albuminous matters. The transformation of fatty substances is, in M. Mialhe's opinion, effected by a somewhat similar process. Digestion, therefore, does not consist in a simple solution of the food, but is resolvable into two species of fermentation.—*Comptes Rendus*, 3 Août.

AGE A PREDISPOSING CAUSE OF ASIATIC CHOLERA.

ONE of the most remarkable of predisposing causes to an attack is *advanced age*, as well as one of the most unfavourable circumstances as respects hopes of recovery. Instances of attack before puberty were comparatively few: but the frequency of the seizure after forty years of age increased in the proportion to the advance in age, and the mortality in still greater proportion; so that after fifty-five years, recovery was rare.—*Copland.*

ON THE TYPES OF INTERMITTENT FEVERS.

M. NEPPLE has endeavoured to determine under what circumstances intermittent fevers may manifest a quotidian, tertian, or quartan type. It would appear that the relative frequency of these types varies with the latitude. Out of 3,114 cases of fever treated at Bona and Algiers,—and out of 954 cases treated in the Canton of Monthiel (Ain), the types were as follows:—

	Bona and Algiers.	Ain, France.
Quotidian fevers . .	2,181	443
Tertian	901	420
Quartan	32	91

All medical writers who have writ
fever, as it exists in northern climate
in regarding the tertian as the most c
type; while the above facts prove t
quotidian is more frequent in warm
tudes. The quotidian type, accor
M. Nepple, occurs most frequently i
years, while the tertian form is,
other hand, most frequent in cold
The quotidian type of fever appears
less dependent on marsh miasmata
accessory circumstances.—*Gaz. Med*

ACTION OF ALCOHOLIC LIQUIDS O FERENT ANIMALS.

BY M. BOUCHARDAT.

WHEN alcohol is introduced into the
lation, its elements combine with the
of arterial blood; and the globules
ing thereby deprived of this vivifyin
ciple, no longer assume a florid red
The animal becomes asphyxiated; an
quantity of alcohol be large, it d
speedily as if it had been plunged i
atmosphere deprived of oxygen. C
rous animals, as the dog, which has
stomach compared with the rest of
mentary canal, are very easily affec
alcohol, and may be destroyed by a m
dose, for the liquid is rapidly absorb
is not carried beyond the duodenum.
bivorous rodentia, as rabbits, are
manner easily killed by small quanti
alcohol. Absorption takes place rap
the stomach; and alcohol is not fo
the intestines. Granivorous birds,
chickens, will bear comparatively
doses of alcohol. The inner cavity o
stomachs is of limited extent, and the
itself is formed of powerful muscles.
alcohol is injected, it is soon expelle
this cavity, and is found in the inte
it is thence carried to the liver by th
portæ, and only reaches the great
the circulation slowly. Fish will li
temperature of 41° in water, which c
one half-hundredth part of alcohol.—*C*
Rendus, Juillet.

ACTION OF SULPHUR UPON POTASH, AND THEIR CARBONATES.

BY MM. FORDOS AND GELIS.

THE product of the action of sulp
potash or soda is well known und
name of liver of sulphur. There a
varieties of this compound; one m
the *dry way*, with the alkaline carb
and hitherto regarded as a mixture o
sulphuret and sulphate; and another
in the *humid way*, in which the
alkalies are dissolved in water, and t
phate is said to be replaced by a h
phite of a peculiar composition.

Liver of sulphur prepared in t
way.—The experimentalists ascertain

sulphur expels carbonic acid from the carbonates of the two alkalies, at very different temperatures. In employing carbonate of potash the reaction began at 227°, *i. e.* near the melting point of sulphur; and it was completed at 356°. The carbonate of soda, on the other hand, required for its decomposition a temperature of 495°.

An examination of the potash-compound showed that it consisted entirely of sulphuret and of hyposulphite, without the least trace of sulphate of potash. The two products were easily separated by alcohol, the sulphuret only being dissolved. The following formula expresses the reaction and product:—

$$3\ KO + 12\ S = 2\ S^5K + S^2O^2KO$$

In employing a smaller quantity of sulphur, a polysulphuret of a less degree of sulphuration resulted, but in no case was any sulphate produced. Pharmaceutical and commercial specimens of liver of sulphur had a similar composition.

A red heat is by no means necessary to the formation of this compound. At a high temperature, 540°, the hyposulphites of the alkalies become changed into three equivalents of sulphate and one equivalent of sulphuret. This result explains why sulphate of potash was found in the analyses of liver of sulphur made by Vauquelin and Berzelius. As the carbonate of soda requires a very high temperature for its decomposition, the production of sulphate is more likely to occur in this case; since the change only takes place at a temperature near to that at which the hyposulphite itself undergoes decomposition. The carbonates of barytes and lime are only attacked by sulphur at a temperature much higher than that which can be indicated by a mercurial thermometer: hence, a hyposulphite of these bases is never formed.

In operating in the *humid way*, in close vessels, MM. Fordos and Gelis have ascertained that whether the alkali employed be caustic or carbonated, a neutral hyposulphite alone is produced together with the metallic sulphuret. Each equivalent of base is combined with a quantity of acid, which represents two equivalents of sulphur. It was remarked that sulphuretted hydrogen gas escaped during the whole of the time that the sulphur was kept boiling in the alkaline liquid. The authors then confirm the results obtained by Rose on the sulphurets; and point out a source of fallacy in some of the analyses made by Berzelius.—*Comptes Rendus*, Juillet 27.

ON A METHOD OF DETECTING THE ADMIXTURE OF WATER WITH WINES.

M. **Bouchardat** has discovered that a fraud is practised on the *octroi* of the French cities, by passing in wines containing a large quantity of alcohol; and afterwards increasing the bulk of these wines, by the addition of water. As the best method of detecting a fraud of this kind, he determines the weight of solid contents in a measured quantity of the wine. Good potable wines leave 22 grammes of dry extract. Wines which had been mixed with water, left only from 14 to 16 grammes of extract.

As a corroborative experiment, he discharges the colour of a standard, as well as of a suspected specimen of wine, by means of chlorine, and adds to the two liquids an excess of the oxalate of ammonia. If there be an abundant precipitate of oxalate of lime, the inference is that a quantity of hard water has been probably mixed with the wine. Potable and genuine wines, which have been kept for a proper length of time (two years), lose the calcareous salts which they contain, these being precipitated in the form of tartrate of lime. Hence there is little or no precipitation of oxalate of lime on the addition of the test to them.—*Comptes Rendus*, Juillet.

⁂ The tests proposed by M. Bouchardat may apply to French "*Vin ordinare;*" but they appear to us too artificial for general use. The strength of wine, and consequently its freedom from water, is easily determined by distilling a given measure at a gentle heat to one-half or three-fourths,—adding distilled water to the product in the receiver, until the quantity is equal to that of the wine distilled,—allowing time for free admixture and cooling, and then taking the specific gravity of the liquid. A reference to the common tables for the specific gravities of different mixtures of alcohol and water at a certain temperature, will at once determine the strength.

The strength of wines does not depend on the quantity of dry extract obtained from them, nor on their freedom from lime; and if the Parisian dealers were to use a little coloured extract, or to employ *rain* or *distilled* water in adding to the bulk of their wines, M. Bouchardat's tests would entirely fail to detect the imposition. Under no circumstances, however, could the experimentalist be deceived, if he relied upon the determination of the quantity of alcohol present.

OBITUARY.

On Thursday, the 27th inst. at 21, Baker Street, Portman Square, Thomas Jackson, Esq. late Surgeon of the 14th Regiment, after a long and protracted illness, aged 80.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Aug. 22.

BIRTHS.		DEATHS.		*Aver. of* 5 *yrs.*	
Males....	639	Males....	480	Males....	493
Females .	639	Females .	422	Females .	475
	1278		902		968

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Summers; Col. B of 5 Years.

		A.	B.
ALL CAUSES	902	898	968
SPECIFIED CAUSES	901	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		201	188
Sporadic Diseases, viz.—	258		
2. Dropsy, Cancer, &c. of uncertain seat	105	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	125	155	157
4. Lungs, and other Organs of Respiration	208	227	294
5. Heart and Blood-vessels	26	23	27
6. Stomach, Liver, and other Organs of Digestion	99	87	72
7. Diseases of the Kidneys, &c...	5	6	7
8. Childbirth, Diseases of the Uterus, &c.	5	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	7	6	6
10. Skin, Cellular Tissue, &c.	1	1	2
11. Old Age.........................	33	52	67
12. Violence, Privation, Cold, and Intemperance	29	26	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	9	Convulsions	35
Measles	6		
Scarlatina	10	Bronchitis	14
Hooping-cough..	18	Pneumonia	30
Diarrhœa........	145	Phthisis	144
Cholera..........	15	Dis. of Lungs, &c.	7
Typhus	26	Teething	7
Dropsy..........	10	Dis. Stomach, &c.	11
Sudden deaths ..	4	Dis. of Liver, &c.	11
Hydrocephalus ..	30	Childbirth	3
Apoplexy........	21	Dis. of Uterus, &c.	2
Paralysis........	10		

REMARKS.—The total number of deaths was only 4 above the summer and 66 below the annual average! The deaths from diarrhœa and cholera have decreased. The mortality from diarrhœa among infants still continues very great (deaths in this class 121). There were only 15 deaths from cholera, of which 7 occurred among infants. In all the districts, the deaths were about the averages. There is this week the rare circumstance of the births in the metropolis being precisely equal in the two sexes.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·64
" " Thermometer[a]..............60·8
Self-registering do.[b] ......max. 93·8 min. 45·
" in the Thames water " 68· " 64·2

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·76: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 1° below that of the mean temperature of the month (61·6°). The extreme hebdomadal range in the self-registering thermometer was 48·8°.

NOTICES TO CORRESPONDENTS.

Dr. Rowland's paper has been received, and will have early insertion. A proof shall be sent.

Mr. Pretty's case will be given.

We hope shortly to be able to resume the publication of the concluding portion of Dr. War-*dell's paper* on the Scottish epidemic fever.

Professor Puchelt's case of poisoning by nitric acid will appear next week.

Dr. Coley's paper on passive congestion of the uterus has been received.

The case of hæmorrhage following the operation of tapping will be inserted in our next number.

RECEIVED.—Dr. Fuller.

ST. THOMAS'S HOSPITAL. —MEDICAL and SURGICAL SCHOOL.— Session 1846-47, commencing on Thursday, the 1st of October.

Gentlemen are admitted Students of St. Thomas's Hospital on producing Testimonials as to Moral Character and general Education, having the option of paying £40 for the first year, the same for the second, and £10 for each succeeding year; or of making special entries to any Course of Lectures, or to Hospital Practice as heretofore.

Clinical Clerks, Clinical Reporters, and Surgeons' Dressers will be selected from the Students, according to their general proficiency and merit, without any additional fee.

The Dressers will be provided with Rooms and Commons in the Hospital, free of enpence, during their weeks of attendance.

Students who are now pursuing their Studies at the Hospital will participate in these advantages, and will be required to pay in proportion to the sums they have already advanced.

Prizes and Testimonials will be awarded to the Students according to their assiduity and acquirements, after the periodical examinations.

The Certificates required by the University of London, College of Physicians, College of Surgeons, and the Society of Apothecaries, will be given for Practice and Lectures which have been attended.

The Introductory Lecture will be given on Thursday, October 1st, at 2 o'clock, by Dr. Barker.

Dr. Roots, Consulting-Physician.
Dr. Burton, Dr. Barker, Dr. Leeson, Physicians.
Dr. Goolden, Dr. Risdon Bennett, Dr. Cohen, Assistant Physicians.
Mr. Green, Mr. South, Mr. Mackmurdo, Surgeons.
Mr. Solly, Mr. B. Travers, Mr. F. Le Gros Clark, Assistant Surgeons.

Clinical Lectures and Instructions will be given by the Medical and Surgical Officers, during the Session. The Wards are visited daily at half-past 12 o'clock.

Ophthalmic Department.—Mr. Mackmurdo, Surgeon.

Lying-in Department.—Dr. Cape, Dr. Waller, Physicians; Mr. W. W. Moxhay, Assistant-Accoucheur.

For further particulars and prospectuses, apply to Mr. Whitfield, Resident Medical Officer and Secretary, who is authorised to enter Students.

A GENERAL PRACTITIONER in the Country is in want of a VISITING and DISPENSING ASSISTANT, possessing the double qualifications; he would prefer a Gentleman who has just passed his examinations.—Address X., Messrs. Winstanley and Son, 7, Poultry, London.

CAUTION to the MEDICAL PROFESSION.—The Proprietors of the LONDON MEDICAL DIRECTORY beg to Caution the Profession against replying to any circular of interrogatories, or writing their names as subscribers to any blank form, which does not emanate from their publisher, Mr. Churchill, Princes Street, Soho, to whom alone all communications for the the Editor, as hitherto, are requested to be addressed. Circulars from this office will be posted in a few days.

Medical Directory Office, 46, Princes Street,
Soho, Sept. 3, 1846.

London Medical Gazette.

Lectures.

A COURSE OF LECTURES ON

ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

BY PROF. FARADAY, D.C.L., F.R.S., &c.

LECTURE VII.—June 6, 1846.

No loss of electricity in the production of magnetism—production of electric force from the magnet—magneto-electric phenomena—when and how produced—effects on the galvanometer—the same effects from temporary magnets—electrical phenomena from the magnetism of the earth—magneto-electric machines—principles of their action—their great power in generating electricity—formed of conducting materials—lines of magnetic force—motion produced by magneto-electricity—the force inexhaustible—the moving power in the machine itself—various forms of apparatus—effects of the magneto-electric current—magnetic sparks—heat produced by it—shocks—inductive action of currents—effect of a disk of copper on the vibrations of a magnet—effect of a revolving disk of copper on the magnet at rest—cause of these phenomena—modifications of the apparatus—effect of a powerful magnet on a heavy bar of copper in motion—on a revolving plate of brass—diamagnetic phenomena—electric currents obtained from terrestrial magnetic currents—cause of the aurora borealis and australis.

THE philosophical course of inquiry which we have pursued together for the last six weeks, into the nature and relation of those two extraordinary forms of power in matter called electricity and magnetism, have brought us to the point of seeing that we can obtain from electricity strong magnetic influence. Last week we were able to produce, by means of electric currents, exceedingly powerful centres of magnetic force. I am particular in reminding you that, in thus obtaining magnetic from electric force, it is not by any direct conversion of electric force into magnetic force; there is no loss of electric power in producing the secondary or magnetic effect. Yet it is a kind of loss certainly, a kind of production certainly, but not at the expense of the electricity which is sent through the wire carrying the current. It is very important to the correct understanding of the true relations of electricity and magnetism, and of their probable identity, that you should bear in mind this fact,—when we convert any form of mechanical power into another, as the to-and-fro motion into the circular, we take away a certain amount of one power from one form, and throw it into another. It is not so in this case. Last week I shewed you that we may obtain most powerful magnets by currents of electricity sent round iron, and which are not increased or decreased, or in any way altered in force, during the time the iron shews the extraordinary accumulation of magnetic power. To-day we have to consider the converse to what we had last Saturday, viz. the *production of electric force from the magnet.* Here you must keep in mind that extraordinary fact, that we shall produce the electric force now to be evolved or put into activity without the consumption of magnetic force. We shall get electric in addition to magnetic force. I state this, that you may see how it is confirmed by experiment, and how important will be the conclusion.

Let us proceed to obtain electric force by means of the magnet. In successfully carrying out the experiments, we shall shew, not the conversion of the two powers into one, but their relation, as cause and effect, each to the other; and we may be able at least to form a judgment of what their real and true relations are.

I am obliged to make a selection of those experiments which convey most directly and fully the results which we require. Here I have an arrangement of wires adapted to carry currents of electricity, or of magnetic force, and to show either that the current exists, or to produce it. Here is our indicator, consisting of a helix, a magnetic needle, and two wires coming from them. I have completed the connection with the helix, which is merely a continuation of the wire through which the current is to go, so that we may get accumulated effects. It is an endless wire; and a current that can be directed through any part of it will be shewn by its influence on the needle. But I have no means yet of producing the current. I do not intend to take the means you have already seen. I do not mean to take the electrical machine, or the voltaic battery, but I shall take magnetism itself. Here I have a common finished magnet, such a one as will shew its power, and you see it readily drives the end of the needle round: taking this, I will now endeavour to procure from it electricity which will make itself manifest. In order to accomplish this I merely have to drop the magnet into this helix. Look at the needle (a delicate galvanometer); see where it has already swung. By just taking the magnet from the helix, we shall bring it to a state of rest, and you will then see a very important point. The magnet does nothing while in the helix; when we bring the needle into a proper

809.—XXXVIII. *Sept.* 11, 1846.

point of rest, you will find the presence of the magnet has no influence. I have left the magnet in the helix, and there is no current, nor any indication whatever of the presence of the magnet; but, strange to say, you will find, *if I take away the magnet*, an effect like that of putting it in, is immediately produced upon the needle, not by any direct influence of the magnet upon the needle, but by the influence of the current generated here, and transmitted through these wires. Thus you see I get a current of electricity immediately produced by this very simple arrangement of matter.

Then, if I take you two or three steps further, you will perceive how singularly and beautifully I obtain this current. You see, first of all, that either putting the magnet *in*, or taking it *out*, will create a current. The putting in effect is to drive the end of the needle to my right hand; the pulling out will drive it in an opposite direction. Look at the additional impulse to the needle caused by pulling it out. If I wait till the swinging takes place, then it returns to my right hand. Putting in the magnet will stop the needle. Putting in one end of the magnet makes the needle go to my right hand; putting in the other makes it go to the left. If I place this pole in one way, it makes the current run one way through the long wire; if I put in the other, it makes it go the opposite way. It is desirable to bear this in mind, as a proof of duality of force. I will not say that you can remember which way the current runs as regards the pole, but you see that contrary currents run according as this or that pole enters into the helix; and the pole entering the helix makes the current go in one direction, while the coming out makes it go in the other. As we thus obtain by a simple experiment, a proof that electricity can be procured from magnetism, so we arrive at the simple and beautiful law under which it is procured.

Besides this, it is not merely putting a magnet in, but the actually making a magnet of a piece of iron placed in the helix, will have the same effect. I shall put a piece of soft iron, which is not a magnet, into the helix, and the needle is now at rest. The moment I make this iron a magnet, which I can do by bringing another near it, you will find a reflection on that needle. If I take advantage of the return of the needle in an opposite direction, and aid the return, I can swing the needle a long way round. There goes the needle. These two modes of obtaining electricity by magnetism involve pretty well all the arrangements which have been constructed for the purpose. And as I go to different facts by and by, to show how high we have raised the excitation of this wonderful power, you will still remember that the putting in of the magnet, or the making of a magnet within the helix, will give us currents of electricity.

But I can stop the currents by stopping the circuit. No introduction of a magnet, unless the circuit is complete, will make a current. By keeping the wires apart, and preventing the continuous round through which the current must run, I shall get no effect. There is a mere swinging of the needle, arising not from any magnetic action, but from the momentum given to it by the former experiments.

Having again made the circuit complete, I have to shew you another, and a simple fact, by which we can procure electricity from the magnet.

Here is a magnet, forming part of the circuit of wire which I hold in my hand. The effect will be very simple. It is a very general effect that I am about to shew, and is therefore very important. Whenever any single part of this wire passes across the lines of force, which I call magnetic curves, and of which I shewed you a drawing, and said, respecting the earth, that the rope represents the curve in this room (a rope placed in the direction of the magnetic dip) —whenever a wire of this sort passes across the curves, instantly a current of electricity tends to come through the wire, and will pass from it by a complete circuit. I have got a current simply because I have gone across the line of direction of that rope. If I take a wire through, I shall have a little current; and although it is but little, I should like to shew that it exists. I must get two or three alternations before I can make the momentum visible to you; note, the needle stands. The coils of wire are about parallel to that needle; you will easily see the difference by and by. Now a current has gone through, and I will wait till the effect of momentum ceases before I produce a second current. Now I have no doubt it has gone the second time, although I cannot say I see the effects; therefore I must go to another expedient, and take a piece of wire large enough to shew it. I have taken the helix off the table, and put on this other little helix, which is flat, and which can go between the pole and the magnet; it is formed of wire coiled round, and covered with sealing wax, to prevent contact from the contiguous bodies. This will form one part of the continuous wire with which we are dealing, through which I am striving to send our current, and which we obtain merely by passing any large portion of the wire across the magnetic curve. Here is the wire continuous throughout; and now, at any rate, I have an effect. See how the galvanometer swings. I have accumulated magnetic power by virtue of this bar in the helix. By putting it in and going to the middle I get a certain deflection;

when I take it out, I get another. I must not go across the poles, or I could not operate. If I take it out, I am sure to get a movement. We have now given an additional impulse to the needle by that particular current. Perhaps you will understand this in a better way if I take this form of apparatus, which you will easily comprehend when you once observe that the wire going between the poles has an effect. This is an attempt to make the single wire effective. When I take the poles of that magnet, in putting in a single wire, I must wait till the needle has taken a swing; but if, in place of using a single wire, I take the ends of these galvanometer indicators, and make one touch upon the axle of the wheel of the magneto-electric apparatus before me, and one touch there, then that part of the copper plate between the axle and my left hand is the part which goes between the poles. Still, as we turn to get a fresh part of the wire, or rather plate, between the two extremities of this coil, it is always moving between the two poles in this sort of way. The consequence is, it is not merely once passing through the poles, but long passing them, and I get electricity; and I have merely to make contact here and there, and look how the needle travels, and will travel as long as the instrument is turned. I will now stop that vibration, and bring the needle to rest. You see how I can govern it. When the machine is turned the opposite way, the needle will take the opposite direction; it is now doing so. I have by this expedient a beautiful electric machine.

I had the curiosity to make a machine of this kind, which I now shew you, and which I put before you as being an instrument that gives vastly more electricity than the machine you saw the other day. I can put this wheel here, and the magnet here, and wedges hold it in its place. By this wheel I can turn the upper and lower disks. You will see the motion between these points is in a continuous line. This part can move, is ever passing across these lines, and it cannot pass without forming a current. All I have to do is to connect the ends of the wire with the upper and the lower disks, and I have now got a beautiful electrical machine from this application of the magnet. I am speaking to those who well understand me; and when I say beautiful, I refer to principles, and the successful results of their application It is beautiful, not because you see a few minute sparks of light (the magnetic sparks), but because it appeals to reason, when you see that the arrangement of copper wire, which can move across, when it comes to this place gives a current. I find I can by turning the wheel affect the wire; or if I turn the other way, it gives the reverse current. You see how *far the* needle of the galvanometer is sent round. The large electrical machine which I formerly employed never could affect the needle like that. If I had tried to work it, and had had a steam engine of twenty-horse power, I could not have procured electricity like this. This machine for the production of an electric current is worth at least 50,000 of the large electrical machines; that is to say, it can produce, by merely turning the hand, 50,000 times the electricity that the large plate-glass machine produced. Although it is a curious-looking machine, it shews the course of the current, which is of more importance than the mere sparks which you saw produced by the other. Instead of being formed, like the electrical machine, of insulating matter, it is actually formed of powerfully conducting matter. All depends on the perfection of conduction, as in the other all depended on the perfection of insulation. It furnishes the most beautiful contrast in developing the same agent, which you can well imagine.

Now the law under which these curious effects are produced, is simply that the matter which can conduct electricity should move across the magnetic curves, the magnetic lines of force. These lines of force that pass from one pole to another, in a course represented by the attraction of iron filings and nails, can be cut or intersected in various directions. Suppose a line to stand up about there, and a wire cuts across it in any direction, so as to intersect it; if it cuts it but a little, a small current is produced. This common-place observation is quite sufficient to give the true character of the phenomena by which a current is produced. The line which is of the greatest strength is immediately between the poles, and any intersection of this kind must be powerful and effective. Nevertheless, the slowest motion of a wire across that line, tends to produce the currents of electricity. I believe we have ascertained the existence of such currents by the earth's magnetism and the earth's motion. It very often happens that where we have a magnet of the horse-shoe form, the lines are more or less oblique, yet they still serve for the production of electricity. I am tempted to put up this little arrangement to shew you one current, because I shall by and by apply it. There is a magnet placed over that plate; and you will presently see a very strange effect produced by a magnet and copper plate so placed, which is all I meant to shew you. These plates are revolving, and will now cut certain of the lines of force that emanate from this place; and there will be a tendency to produce electric currents in them; and the moment we turn the plate, though it be not in the same favourable con*dition* as the one you saw before, still, because it cuts certain of the lines of force, you will have a current of electricity. I have no doubt, if I hold it there, to keep contact, it will affect the needle: it does so. If the plate be turned the other way, we shall get a current in the opposite direction; and now the needle moves in that direction. You see the effect of it. I say that every intersection of the line, provided there be metal enough for conduction, gives us a current. But an effect still more extraordinary, and which may startle you when we come to consider the results, is obtained in this way; that actually a magnet is about to produce, of itself and by itself, electricity, and under such conditions as tend to shew us the wide diffusion of this extraordinary power. These currents are produced without any exhaustion of the magnetic force by which they are formed. You see here a very rough and careless arrangement, in which a bar magnet is placed between two magnetic centres, which are connected by a wire; so that if I make one of these galvanometer wires touch the hook above, I then have a magnetic connection with both ends of the wire; and further, if I make the other wire of the galvanometer touch the middle part, then I have complete circuits of both ends of the wire to the middle. Under these circumstances I get electricity from the magnet itself, without putting it in a helix. If I make this wire touch, I have an effect upon the needle; the moment the magnet moves, a current of electricity will flow from it. Really I do not know any thing more wonderful than to find a machine that has the origin of its power within itself, and can produce power external to itself, without any exhaustion of that which is within it. Now I shall move the needle. In turning this round, the magnet goes to my left hand. I will reverse the motion, and I soon get a strong accumulation of power, by making the magnet spin the other way. I am now getting motion in an opposite direction. I do not know any case so extraordinary as this, where the power goes with it, and must always go with it, and still produces currents of electricity to perpetuate its own motion. The magnet alone is the source of power, and you have the currents of electricity immediately produced by it when in motion.

Having given you these various facts, I may next shew you some of the machines used for procuring this power. First of all, here is the magneto-electric machine, the beautiful arrangement of Saxton. He was the person who first invented an arrangement of this kind, or formed a revolving disk. A French philosopher constructed an apparatus in which he made the magnet revolve; but Saxton did better, by making the armature revolve. Here is the magnet fixed. Here are two wheels in which there are two
pieces of soft iron. Away go th
two parts of this arrangement.
get the electricity to such a degree
tain the sparks which we had in the
though not so powerfully. I onl
work the machine, and there are t
If I take a short platina wire, I sh
to get heat enough from the electr
duced by magnetism to make the wi
There! it is red hot, by the electri
ing up from this magnet, and going
as I please to keep up this motion,
haustion of magnetism, but by t
induction of currents, through the
of this line of force, upon that meta
another form which Mr. Newman
and I am giving you these variou
order that you may see how the ide
practically carried out. The pow
plied not only to produce currents,
a shock to the system, but actual
a tinder box. The notion is, that
a drop of ether, and holding it,
get a light. I only shew it as a tr
spark, that can heat wire, that ca
substances; and if you touch a
media for conveying these curre
by, you may find a very powerful
the system. I have put a littl
ment in the next room, dependen
magneto-electric influences; and
your hands into the basins of w
there, you will soon find what th
the shock is that can be given b
produced on this principle.

I should like to point out to y
we leave this part of our subject
electro-magnetic currents have a
ductive action on each other, very
what you see is produced by
electric currents. I shewed you
that when these two flat helices
pended, and a current sent thr
they mutually repelled or attr
other, according to the directio
took. Now I will shew that
electricity have the power of ind
currents, just as the magnet has
as you saw induction by the electr
machine. For if I bring these tw
which are only two arranged
helices—if I bring them near ea
this place, I send the current
through that wire. Then, these
enough, another current will be s
the other wire. Inasmuch as th
magnet, being brought up, wo
current electricity, so other curr
are themselves magnetic, can produ
influence, and bring about the sa

I am now going to use anothe
prove that the magnet and th
alike in their kind of power, alth
degree. This helix with the g
forms one continuous wire, and

with the battery will form another, so soon as contact is made. I must allude here, as I did before, to the circumstances of not altering things when you are getting the effect of induction, because, as you see, I shall get a current on first making contact. I shall have none while it continues, and on breaking contact I shall get another current, but in a contrary direction, the same as with the magnet. There is now contact, and the needle moves; it is now sailing back. We have added a second impulse by induction, which has created in this wire a current, that has been shewn by the needle. On breaking contact I have a third induction; and in this way I can add another current, to bring the needle to any degree of deflection, shewing that I get the reverse currents as we make and break contact, the same as by putting the magnet into the helix, or putting iron there and making it a magnet, or bringing other currents near. I can produce this curious and beautiful electric current as the result of induction.

Here are certain arrangements made to repeat a curious experiment which Arago first taught us, and of which you will see the principle almost immediately. There is here a magnetic needle, balanced horizontally, and pointing north and south; it swings very well; it has swung round, and is swinging again, and will swing backwards and forwards until the resistance of the air, and the friction of the pivot, bring it to rest. Indeed, nothing will stop the vibration of the needle except the resistance upon the pivot, and the resistance of the air. You may see now that it swings freely, and these resistances are not very great. Suppose we ascertain, first, the place of rest; it is about there; I will mark it with a shilling. Suppose I force this needle out of its position, and get it at right angles to the line it would naturally take; mark that by a rod, and leave it free to swing. It swings almost round; there is now one vibration, and you observe how little it loses during the swing. It has gone a second time round; there is a second vibration, and it will almost take it back to the first place. If you now watch it a third time, you will see that it will come nearly to the same place; it will lose a very little space each time, but the times of the vibrations are equal, whether it swings through a smaller or a larger space. I place it over a plate of glass, and you now observe it is the friction of the air, not the vibrations of the needle, that has caused it to cease covering that distance in its returns. Suppose I take this plate of copper, a metal perfectly indifferent as to magnetism of the ordinary kind, and put it on that arrangement,—and that I may be sure I put it in a right position, we will observe when it comes to a state of rest. If we turn it round, here will be the right angle, and from hence we will start it. Look at what it has lost by one vibration. There is a second, and it has now lost, when balanced over the copper, as much in one vibration as it did before in six. Why? There is no more obstruction in the air,—the same piece of glass is still under it,—every circumstance is the same; and yet the needle seems to be sticking in mucilage which stops it, it moves so slowly. You see by the eye that there is some impediment; it is not vibrating as it ought to do. This is not owing to any accident: if I put it back and repeat the experiment, you will see precisely the same retardations in its motion. It cannot go so far round; each vibration will be shorter in length, though not shorter in time. It takes the same time to make the to-and-fro motion as before, but does not travel through the same space The needle is apparently moving in an obstructing medium, and this is simply because I have placed the *copper under it*. This is the extraordinary experiment which Arago discovered. It is the more wonderful for this reason: if iron were there, it would attract it by its magnetism, and thus delay its motions; but, strange to say, it is the copper, a non-magnetic metal, that here ties down its vibrations. I may bring the copper as near the needle as I please, and yet you see there is not the slightest sign of magnetism in this metal. A piece of copper below the needle has now no influence in the least degree over it; but the piece of copper under the needle has a great influence over it, simply because the needle is moving, and because it is moving over a piece of copper; for you observe that the needle there is much nearer to the glass than to the copper. If I make this a fair experiment, which it ought to be, by bringing the piece of copper as near to the needle as the glass, taking care it does not touch it, you will see far stronger effects take place than before. Now that I have brought the copper nearer to the needle, you will see much greater effects. Here is half a vibration; you see it has lost more, and very soon it will come to a stand-still. It is a very extraordinary and beautiful experiment with reference to the copper, which is in the state of pure metal. The needle now vibrates to and fro, and leaves it without there being any magnetic force in the copper itself, unless it be in respect to the vicinity of the needle while in a state of vibration.

Then, let me take you to another apparatus which Arago invented, and which will give an effect of a similar kind. Here is a copper plate, and we can hang a little magnet over it. I am suspending the magnet by a braid, that there may be a strong twist in the braid itself. I can put it by adjustment over the middle of the plate, and then we will examine what is the effect. The magnet will obey the plate as soon as the plate moves. It will go that way, or will turn in a contrary way. I will turn it the contrary way, and we shall soon overcome its momentum. [The magnet revolved with the copper disk when set in motion.] This motion of the magnet is not owing to its being carried on by the current of wind. If I take a piece of paper, and put it over the copper plate, you will find that the magnet revolves precisely in the same way. It is now obeying the motion. You know, then, by the magnet above, which way the plate is moving. If I put a piece of copper in place of the magnet, it will not be influenced by it. That will take its own course; it tends to swing one way, and it will swing back. We are moving the plate against the force of the copper; we cannot influence the motion of the suspended copper by the plate,—it is perfectly indifferent. But if that copper were a piece of iron, then it would obey this copper plate, which is said not to be magnetic. It is one of those strange phenomena of which we now have the interpretation. Observe, if I take this magnet again, and hang it over the plate, whichever way the plate is moved the magnet will overtake it. I will shew the cause. We will stop the magnet by a little temporary arrangement. We will tie up the magnet, and keep it there, by the ends of this piece of lead. My only point is to keep the magnet where it is. I take the ends of these tell-tales as regards the current (the wires of the galvanometer), and I will examine the plate. You will soon see the secret of this strange motion. There is no current of electricity at present, the plate is at rest; but the moment the plate is turned, there will be a current, and that you will see by the effect on the galvanometer. It is produced in the plate by the presence of two imaginary poles, which re-act upon the poles of the magnet. It is only whilst the plate is moving that you have the effect produced. While the currents are being formed by the copper, they re-act back on the pole: this is the cause of the after-motion. But I will shew this. There goes the needle. By reversing the rotation you see it goes the other way. To those who are so far philosophers as to be able to follow and criticise me in these remarks, I may point out that this reversal of the current by the reversal of the motion of the plate beneath, is a true answer to all that imagine that the heat of electricity is that which produces electricity. But I will not trouble you with thermo-electricity.

There are some very extraordinary and curious modifications of this apparatus, one of which I will shew you. If you take a plate of copper of this kind, put it upon a little arm which shall support it, till it vibrates,—and I have got a mark on this plate,—you will soon see how many times that must vibrate before the retardation of the air will make it reach a second mark. There are eight or nine vibrations, and it has not lost the breadth of the first mark, so little retardation is there produced by the air. But let me take a magnet, and put it before the plate of copper; then see what the difference in the vibrations will be. I will begin again with the place where the mark is. In four vibrations the second mark appears. We are getting to the effect of magnetic curves. You have got the copper moving between the poles of the needles. This is produced by those currents I shewed you in a former experiment, and which form on the face of the copper those spiral circuits which become centres of magnetic force, and hang on the magnet itself.

I will shew you one or two other experiments; and because they are varied in their form, they will be more striking to your minds. Here is a large magnet which I shall use, and speak of when we again meet to consider diamagnetic phenomena. Here is iron, and there are two terminals, which form in fact the two poles. Here is a solid piece of copper,—a heavy piece, therefore. If I take a piece of thread, it is almost certain that the weight of the copper will make the thread spin, and it will immediately take a strong motion. In order to make it more visible I put a piece of card in the thread, so that you may observe what the motions of the copper are, which I am about to put in relation to the magnetic lines of force that will occur between the poles of the large magnet, in a space which I call a magnetic field. I can put it where the magnetic line passes across. There you see it spinning, and here are the poles of the magnet. As to the copper, it is indifferent; there is no action taking place. Now mark the effect of the magnet. When contact is made, what becomes of the copper? This becomes a magnet at pleasure. We shall shew the different parts of the apparatus beforehand, to see the effect afterwards. We do not touch anything, but you see how the copper is stopped when brought between the poles. If we break contact, it again begins to spin. It is no matter how much it spins, the moment he makes contact the magnetic force stops it; and strange to say, unless the parts do cut the curve, the motions are not stopped; thus it is not stopped in this position, (some inches above) because it does not cut the line of magnetic force. It is spinning by the torsion of the thread; but if I bring it between the poles of the apparatus it is stopped. Here is a still more curious fact; it is only the rotatory motion that is stopped. I may still get the swinging motion perfect; this does not cut the line so as to be stopped by the current; but the rotatory motion cannot go on long, for the part which is moving is circulating round the curves.

Look at this apparatus again, and observe the power of the magnetic field, as we may call it. Here is this brass plate; we can put it in the field, and now we have the advantage of working with a magnet which we can make and unmake at pleasure. I do not touch it. This plate, at present, will vibrate as freely as ever it did. It will go off as before; there is nothing to obstruct it. Mark its velocity just before contact is made; it now stops: contact is broken, and it goes on again as fast as ever. If I take up this little apparatus, I must set to work as a child would do, and spin this wheel round, and go on revolving like a grindstone, giving it the peculiar motion which you see; but the moment contact is made, I cannot move it; it will not go round. It is so fixed that I should break my hand to pieces before I could move it. If the power be taken off, it goes round. You must now see the presence and effects of some strange forces in that space which occurs between the poles of this powerful electro-magnet; forces which lay hold of the matter in the magnet, and which, when brought to this intensity, fix the wheel to the spot as if it would never again move. You will find an extraordinary clinging of the wheel to the hand in trying to make it move with velocity.

Let me state to you, in conclusion, that the earth itself, and the lines of force which it supplies to us, can produce current electricity. I should like to give you a feeble but pure case of the production of electric currents by the earth's magnetism alone. At first, this effect of getting electricity from magnetic force was obtained in so slight a degree as to be visible only to those who made the discovery; but, by degrees, we learned the principle on which it rested. Here is a large bar of soft iron now in the helix. I am not able to move it, but we will keep it there. Under such circumstances it would not produce any current; but if I suddenly invert the soft iron and the helix, so as to make the wire act effectually on the needle, I shall get a current, though not a strong one. Now I must wait and accumulate power. I see one end has given the power, and there is the contrary motion. Now the needle is ready. The end towards me goes to my left hand. The next time I get a current I shall send it more to my left hand. I am now taking advantage of the inductive force of the earth alone. There is the needle swinging round to a parallel line with the helix itself. I give the fourth impulse (by inverting the helix with the soft iron enclosed); and it will go a good way. Here are four currents produced from the magnetism of the earth by the mere *motion of* the helix in a particular direction. Thus you perceive that the lines of force going through the earth are able to produce currents; and I have already shown you that a magnet can produce a current in itself. Let me take you to the earth, having magnetic electricity, and revolving on its axis, and say whether there must not be a tendency in the earth for currents to spin around the equator, and go out at the north and south points, as they do in this system. The earth is a vast magnet; and this globe before us is a magnet. The earth spins round much more rapidly than this magnet, and has a tendency to produce in it, by its own motion on its axis, currents just as I shewed you by this experiment. I believe what we call the aurora borealis and australis are nothing more than discharges of electricity, in northern and southern regions, generated by the earth itself as a magnet.

ABORTION: THE UMBILICAL CORD WOUND TIGHTLY AROUND THE LEG OF THE FŒTUS.

Dr. Griscom reported the following case to the New York Medical and Surgical Society:—"A lady became *enceinte*, as she supposed, about eight months ago. The menses disappeared; the breasts became distended with milk, and continued so until the 18th inst. She, however, required my attendance occasionally on account of irregular uterine hæmorrhage, unaccompanied with pain. She was otherwise in excellent health. Last week she received information of the sudden loss of a friend, which caused her great grief; this induced severe pain in the uterine region, at first intermittent. The uterine tumor seemed about the size af my fist. In a few hours the pain became uninterrupted and excessive, and after a time an ovum was expelled rather larger than a goose's egg. It was found to contain a well-formed fœtus of *three or four months*. On examining it, I found the umbilical cord, which was larger than usual, wound around the leg nearly a dozen times, as closely as a thread upon a spool. It required as much force as I thought the cord would bear to unwind it." The cause of death of the fœtus, Dr. G. conceives to have been produced by compression of the cord;—"as the limb grew, the cord became compressed, and eventually the circulation through it was suspended."—*American Journal of Medical Sciences.*

Gangrene, and consequent spontaneous amputation of the limb, has been noticed where this accident has occurred, but then it appears that the cord has not been so extensively twisted as in Dr. Griscom's case; and the malposition must have taken place at a later period of utero-gestation, when the circulation through the funis was stronger, and its vessels less compressible.

FURTHER RESEARCHES ON THE

COMPOSITION OF THE BLOOD IN THE CONDITION OF HEALTH AND OF DISEASE.

By MM. A. Becquerel and A. Rodier.*

Object of the present communication—division of the subject into three heads. I. *Some peculiarities of the blood when left to itself—affinity for water possessed by its various proximate principles—precautions to be observed in drying the solid principles of blood or of serum—examples, shewing the quantity of moisture absorbed in a given time by perfectly dried products of serum and of blood—the alkaline salts probably most active in this absorption—quantity of water lost during coagulation of blood—circumstances modifying the amount lost—density of blood or serum compared with its chemical composition.* II. *The different portions of blood from the same bleeding differ somewhat in composition—nature and amount of this difference—frequent bleeding impoverishes the blood, diminishing the quantity of its solid ingredients.* III. *Variations which the composition of the blood or serum may undergo consistently with health—density and composition of healthy serum—rough analysis of healthy blood—nature of the fatty principles in the serum.*

[The value and importance of the previous researches of Becquerel and Rodier on this subject, and the extent to which the results of these researches have become known and accepted, are sufficient to justify a translation of the further labours of these authors. In several parts the present translation is almost literal, but in others merely the substance of the matter is given.]

The observations here offered comprise, in a condensed form, the results of experiments and analyses made during the last two years, in the view chiefly of confirming, completing, or extending the conclusions to which the previous researches had led. The present remarks will be given under three heads. In the first division will be stated some purely physicial and chemical results, relating to the peculiarities presented by the blood when left to itself, or when submitted to certain influences. This branch of the subject is of importance, chiefly because it tends to remove several difficulties hitherto met with in the analysis of the blood; and because it explains, in some measure at least, the different results obtained by various experimenters who have occupied themselves with the analysis of this fluid. Under the second head will be mentioned some general results obtained from the analysis of blood, without particular regard being paid to the kind of disease for which the abstraction of blood was undertaken. Lastly, under the third head, will be mentioned the several results obtained by studying the composition of the serum of the blood in a number of diseases; omitting any allusion to the weight of the globules or fibrine contained in the specimens of blood examined. At the same time will also be given the results of several complete analyses of the blood, with all the necessary details, without making a separate division for this part of the subject. These analyses were especially made in cases of Bright's disease, eclampsy, and puerperal fever, diseases of the spinal cord, &c. &c. The analyses of blood or of serum alone, on which the present researches are based, are about three hundred in number. In no case was blood drawn for the purpose of contributing to these researches, but in all cases its abstraction was ordered as a strictly remedial measure.

I. Under this head several circumstances may be considered. In the first place, the affinity for water possessed by the various proximate principles of the blood. Whatever method is adopted in an analysis of the blood, it is quite indispensable that one or more of the different albuminous principles contained in this fluid should be dried separately, and with the greatest possible care. The great affinity of these principles for water on the one hand, and, on the other, their ready decomposition when submitted to a temperature at all high, render this operation extremely difficult. It is quite necessary, however, to reduce them to a state of as perfect dryness as possible, otherwise innumerable errors will arise in the subsequent calculations, in reference to the proportions of the other proximate principle in the specimen of blood examined. It is especially towards the end of the operation, when the last few drops of water have to be expelled, that the difficulty becomes so great; for it is often necessary to leave the albuminous matter for ten, twelve, or fifteen hours in the drying apparatus, in order to be certain that, without decomposition, they do not sensibly lose weight, and consequently that they no longer contain any water. The above observation is the more important, because, towards the end of the process of drying, the albuminous matters do not seem to change their aspect, and the decrease in their weight is scarcely perceptible from hour to hour. It is obvious, therefore, how much care and attention is requisite to determine the length of time that the desiccation should be continued, in order that every particle of water should be removed, and yet the albuminous principles not be decomposed. Abundant experience has shewn that, in order to dry properly 100 grammes, either of defibrinated blood, of serum, or of clot, it is necessary that it should remain for at least forty-eight hours continually exposed to heat in the drying apparatus; that the temperature should be about 80° Cent. (176 Fah.); and that the albuminous matter should detach itself almost spontaneously from the capsule in a powdery state, and without having undergone any sensible change in colour. It is moreover essential that it should be weighed whilst hot, directly after its removal from the apparatus. This last precaution is as indispensable as the others; for these organic matters have so great an affinity for water, that, in the space of a few minutes, even whilst cooling, they absorb a sensible quantity of moisture; and this absorption goes on increasing, so that the quantity taken up soon becomes very considerable, especially if the operation is carried on in a damp place. A like absorption of water takes place also when the matter is left in a drying apparatus, which has been allowed to get cold. The presence of this water, during weighing, if not allowed for in the calculation, would interfere most materially with the results. It is, moreover, quite as difficult to remove the water thus re-absorbed, as it is to expel the last portions which existed in matters before complete desiccation.

---

* Translated from the Gazette Médicale de Paris, 27 Juin, and subsequent numbers, 1846.

[A table follows, shewing the quantity of water absorbed by the perfectly dried product of several specimens of serum, after exposure for twenty-four and for forty-eight hours. Two examples may be given, and they about express the average of the rest: 9·0 grammes of perfectly dried solid residue of serum absorbed 0·638 grammes of water after exposure for twenty-four hours; and 9·384 grammes, after exposure for forty-eight hours, had absorbed 1·760 grammes.]

Almost similar results were obtained with the dried solid matter of blood: 35·557 parts, in one case, having absorbed 1·422 parts of water in twenty-four hours; a quantity which, if not allowed for, would have led to considerable errors in calculation. The rapidity with which water is absorbed in these cases is very great. For example: a portion of perfectly dried blood which, when warm, weighed 19·901 grammes, in ten minutes after, from the water which it had absorbed, weighed 20·067. * * * *

In the above remarks the somewhat vague expression of "albuminous matters" has been designedly employed; for it is difficult to decide positively whether it be the albumen, or the other constituents of the blood, which have so great a tendency to absorb water. Some experiments, however, would seem to show that this property belongs especially to the alkaline salts, to free soda [?], and to the extractive matter soluble in water.

The second point to be considered under this head is, the loss of watery particles which the blood undergoes when exposed to the air, during its coagulation. The quantity thus lost is sufficient to interfere materially with the calculations respecting the relative proportion of solid and liquid principle in the blood. The amount lost depends on the three ordinary circumstances affecting the evaporation of liquids; viz. extent of surface, degree of temperature, and the dry or moist condition of the surrounding air.

[Several tables are given shewing the effect of evaporation in diminishing the weight of a given portion of exposed blood in the course of two and of twenty-four hours. Some precautions also are mentioned by which this source of error may be avoided.]

A third point for consideration is the density of the blood or of the serum, compared with its chemical composition. The density of the blood, such as it exists in the circulatory system, cannot be exactly determined. Scarcely, in fact, has the blood escaped from its vessels ere the process of coagulation commences, and changes are effected in its volume which render the determination of the density of this liquid almost impossible. The density of defibrinated blood is more easily determined; and its comparison with that of distilled water at the same temperature and in the same volume gives very exact and precise results. Nevertheless, no very positive conclusion respecting the quantity of solid matter present in a portion of this fluid can be drawn from these results. For there does not seem to be any direct and uniform relation between the weight of the water and that of the solid constituents to the corresponding densities; so that it was found impossible to construct a table which would indicate exactly the quantity of solid matter contained in a portion of defibrinated blood of any given density. The determination of the specific gravity of the serum, however, leads to clearer and more uniform results, although even these are often only approximative ones; yet, in many cases, the density of the serum expresses very exactly the relative quantities of water and of solid constituents. For example: when the solid matters of the serum are present in such proportions that the whole of the extractive matters, of the free salts, and of the fatty principles form one-ninth part of them, and the albumen the other eight-ninths, the information afforded by the specific gravity of the fluid is very accurate and constant. But if albumen predominates, these relations change, and the numbers expressing the total weight of the solid matters correspond to lower densities. If, on the other hand, the extractive matters and free salts are relatively in excess, and instead of forming but one-ninth part of the solid constituents, they form one-eighth, or even one-seventh, then the numbers expressing the weight of the whole solids in the serum correspond to a higher instead of a lower density. In some more rare cases the fatty matters occurring in excess interfere with this result, or even tend to lower the density.

[Some observations follow, the object of which is to show that, in all examinations of the serum, undertaken with the view of comparing the results with those obtained in other analyses. it is essential that the comparison should be made not only between the serum obtained from a given quantity (say 1000 grains) of different specimens of blood, but also between similar quantities of serum, without reference to the globules and fibrine of the blood].

II. It was shown by Dumas and Prevost that the different portions of blood obtained from animals at a single bleeding are not quite similar in their composition—the latter portions being less rich in solid constituents than the former, and consequently more aqueous. A like condition holds in the blood of man, and the diminution in the quantity of solid ingredients seems to be progressive, commencing probably with the first drops which escape from the vein, and ceasing only with the last. This may be shewn by the following experiment:—If, in a bleedpig, which is to consist of 400 grammes, the quantity of blood drawn be divided into four equal portions, each of which is received into a separate vessel, then carefully dried, and its residue weighed, it will be found that each quarter will contain a proportion of solid matter less than that of the quarter which preceded it; the degree of diminution, however, is not the same in each, nor does it seem to occur in any given ratio. The following example [selected from several others] illustrates this. The

	Water.	Solid Ingredients.
1st 100 grammes of blood contained . .	83·29 grs.	16·71 grs.
2nd 100	83·39	16·61
3rd 100	83·50	16·50
4th 100	83·68	16·32

The diminution of solid constituents is principally at the expense of the globules, and a little, though much less, of the solid matter of the serum. The fibrine does not seem to suffer any alteration in its proportion. The only way of accounting for this impoverishment which the blood progressively undergoes during its withdrawal from the veins, seems to be the one suggested by Dumas and Prevost; namely, that as the vessels become emptied of a portion of their contents, they rapidly absorb from the rest of the system a quantity of fluid, which is probably equivalent to that they have lost, and so the mass of solid particles in a given quantity of blood appears diminished. It follows, from what has been said, that the portion of blood first drawn is the one which ought to be selected for analysis, inasmuch as it best expresses the condition of the whole blood at the time of bleeding.

When an individual is bled many times, his blood becomes impoverished, being less rich in solid ingredients, especially in globules, the diminution of which is rapid and proportioned to the abundance and repetition of the bleedings. A similar diminution takes place likewise in the solid ingredients of the serum, a diminution which varies greatly in mount, being sometimes very great, sometimes only trifling or even imperceptible. To judge correctly of this determination, an interval of not more than twenty-four or forty-eight hours should elapse between the two bleedings.

* * * *

III. To determine the composition of the blood in its healthy state, and the limits within which the different chemical elements entering into its composition may vary consistently with health, are two points which it is important should be precisely fixed. The proportions of the several ingredients vary, in fact, according to sex, age, constitution, and other physiological conditions. Indeed, it may be said that they are seldom identical in two individuals; and that, in order to establish in a definite manner the nature, character, and degrees of the modifications which the blood undergoes in disease, it would be necessary to compare the results of the analysis of diseased blood with its composition in the same individual when in a state of health. Were it possible to do so, many modifications of the blood, which are now considered pathological, would doubtless cease to be so. This, however, can scarcely be expected. Nevertheless, in order to judge of the modifications which the blood itself, or the serum, may undergo under various conditions, it is essential to form a tolerably correct estimate of its composition in a state of health. In the following observations, the composition of the serum in health has been estimated by analysing it in nineteen individuals, eleven of whom were males and eight females. The serum, after being dried, was washed with warm distilled water, to remove the extractive matters and free salts, and then digested in alcohol, at 36° Cent. (97° Fah.), to remove the fatty matters. The serum in these cases varied in its relative quantity. It was usually of an orange-yellow colour, and of tolerable consistence. In all cases it was decidedly alkaline; sometimes limpid, frequently turbid, either from the presence of globules or of albuminous fragments. Its specific gravity, which was taken with the greatest care, varied somewhat in the different cases. In that taken from nine men who were considered to be in good health, the density varied from 1028·5 to 1027, the mean being 1027·7. In the eight females it ranged from 1028·6 to 1026·6, the mean being 1027·4, almost the same, therefore, as in males. Judging from these cases, the limits within which the density of the serum may vary, consistently with health, would seem to be 1026·6 and 1028·5. In both sexes, 1000 grammes of serum, on drying, gave on the average 909·7 grs. of water, and 90·3 grs. of solid matter; 95·5 and 85·5 were the extremes of the latter, and consequently 804·5 and 914·5 the extremes of water. The average quantity of extractive matters and free salts obtained by washing with warm water the dried residue of 1000 parts of serum, was 8 parts, and of fatty matter, by washing with alcohol, 2 parts. This water was composed in great measure of an animal soap (oleate and margarate of soda), of cholesterine, and of a very minute quantity of seroline. It seems from the above, therefore, that, on an average, 1000 parts of serum is composed of 910 parts of water and 90 parts of solid ingredients; of which latter, 50 parts consist of pure albumen, 8 of extractive matters and free salts, and 2 of fatty matters. Numerous experiments would be required to determine satisfactorily the positive influence of age, sex, and food, on the composition of the serum. As the result of former researches*, it was stated that the average composition of 1000 parts of blood, in the male subject, was—water 780 parts, globules 141, fibrine 2·2, and solid matters of the serum 80, of which latter about 8 parts consisted of extractive matters, free salts, and fatty principles. In the female, the only difference consisted in the weight of globules, which was only 127, and consequently in a slightly increased proportion of water. The result of further researches serve to confirm the truth of these statements, although they have been disputed on the score that the blood must have been taken from plethoric individuals, otherwise the proportion of globules would not have been so great: this, however, was not the case. Amongst other subjects of inquiry in the present researches, great care has been bestowed on the composition of the fatty matters of the serum, which has led to the entertainment of considerable doubt as to the existence of the fatty principle, termed phosphorized fat. The subject has been investigated by M. Cahours, an able chemist, and his results are as follows:—Seroline is always present, but in too minute a quantity to allow of its nature being accurately determined. The cholesterine is exactly similar to that extracted from biliary calculi. The animal soap is composed of oleate and margarate of soda. The principle called by authors phosphorized fatty matter, or cerebrine, although always producing itself under like circumstances, and with the same external characters, is yet a very complex substance. Its re-action is feebly alkaline, and it contains chloride of sodium, a fatty principle, partly saponified by soda, and another fatty principle which is not saponified. This is partially dissolved when boiled in a lixivium of potash, and leaves a brownish extractive matter. The soap of potash decomposed by a weak acid, deposits an oil (oleic acid) and a solid substance (margaric acid).

[To be continued.]

---

* Vide Gazette Médicale, No. 47, et seq. 1844.

COMPOSITION OF KYSTEIN.

In a recent paper on the peculiarities of the urine in pregnant women,* Dr. Zimmerman states that the substance hitherto described as kystein, and about which there has been so much discussion of late, consists almost entirely of the infusoria termed vibrions. These animalcules, he states, are first formed in the lower layers of the urine, which they render turbid; they then rise in heaps to the surface, where they form, together with large crystals of ammonio-phosphate of magnesia, and amorphous phosphate of lime and urate of ammonia, the well-known yellowish-white layer which so commonly occurs on the urine of pregnant women. These vibrions were also observed very largely by Simon in portions of kystein which he examined.†

---

* Casper's Wochenschrift, May 30 and June 6, 1846.

† Animal Chemistry, Dr. Day's translation, vol. ii. p. 331.

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

[Continued from p. 375[*].]

CONGENITAL NARROWING OF THE PULMONARY ORIFICE *(continued)*.

V.—*The pulmonary artery small. An abnormal communication existing between one of its branches and the subclavian.*

It may be considered that, in the following instance, as well as in the case by M. Obet already cited, the arterial duct remained pervious; but it appears certain that, in both of these hearts, the communicating vessel was not in reality the canalis arteriosus, but the remains of the communication which, at a very early period of intra-uterine life, while the circulation of the upper portion of the body is carried on through the branchial arches, naturally exists between the vessels which afterwards form the right and left pulmonary and subclavian arteries. The occasional permanence of this communication between the canals in question has been very clearly described by Dr. Paget.[*]

M. Holst[†] relates the case of a girl who enjoyed perfectly good health until she was two years old, when her skin began to assume a blue appearance, especially at the parts most distant from the heart. She then experienced feelings of suffocation, giddiness, and spasms. These attacks were usually followed by sleep, after which the blueness of the skin was less. Violent palpitations of the heart, with difficulty of breathing, coldness, and frequent epistaxis, gradually succeeded; and though the frequency of the seizures diminished, yet their violence and duration gradually increased. During the paroxysms, the left side became colder than the right, and the pulsations of the arteries at the wrist of the left arm could not be felt. She died suffocated in one of these attacks. The heart was found very large; the right side larger than the left. There was communication between the two auricles, not only by the *foramen ovale*, but also by an abnormal opening. The aorta and pulmonary artery arose from the right ventricle. These arteries and all the others were smaller than natural. The left subclavian artery arose from the upper angle of a triangular sac, into the two other corners of which opened the left vertebral artery and an abnormal canal, considered by M. Holst to occupy the place of the *ductus arteriosus*. By this last the subclavian artery was in communication with the left branch of the pulmonary; but, as this canal was very small, but little blood could enter into the subclavian artery, which seemed to have received most of its supply from the left vertebral: so that the blood, in getting from the aorta to the left subclavian, must have passed through the carotids and the circle of Willis. This condition of parts was considered to account for the occasional cessation of the pulse, and the diminished temperature of the left arm.

---

[*] Since the appearance of the preceding section of my paper I have met with a report of the following case of extreme *narrowing of the pulmonary orifice attended with an unclosed state of the auricular and ventricular septa and arterial duct.* The subject of this rare malformation was a boy, who, for the first two years of his life, did not manifest any peculiarity of appearance or disorder of function beyond occasional attacks of bronchitis, during which his face appears to have assumed a congested appearance. When he had entered his fourth year Dr. John Bell, who narrates the case, found him suffering from the usual symptoms of the blue disease, but apparently not in a very extreme degree. The sternum and anterior part of the thorax were unduly prominent. The pulse was frequent, and rather full, but easily compressed. "Impulse and the bellows sound well marked over the sternum. Dulness on percussion was of limited extent." The respiration was hurried and panting, but he usually ran about and amused himself like other children of his age. From this period up to the time of his death, which occurred when he was somewhat under the age of 8 years, he continued to suffer from repeated attacks of "pulmonary oppression and congestion," which, within the last two years of his life, became more violent. The prominence of the sternum and left side of the chest went on increasing; the distension of the jugulars and their pulsations were still more perceptible. Usually, the [heart's] sounds were not strong, although those of regurgitation were quite distinct. During a paroxysm there was, however, a loud bellows and rasping sound, with another less evident, and comparable to a subdued gurgling or churning. The pulse all the while was frequent, but without force. At two different periods, together with great præcordial and pulmonary compression, dyspnœa, &c., there was tympanitis, with obstinate constipation, and anasarca, against which all the usual diuretics and means of indirect reduction were utterly powerless. But the abstraction of a few ounces of blood, either from a vein or locally, exerted an immediate and beneficially controlling influence over the disease. The common purgatives, diuretics, and expectorants, would then manifest their customary effects. Little or no benefit was derived from digitalis. The appetite was generally good, and the craving for various articles, some of them of an indigestible nature, inconveniently great. He died somewhat unexpectedly, after having in great measure recovered from two very severe attacks, which were relieved by venesection. It was found that each pleural cavity contained five or six ounces of serous fluid, the pericardium a small quantity. The heart was very much enlarged in consequence of the hypertrophy of its right ventricle, the parietes of this cavity being twice their ordinary thickness. Nothing peculiar in the appearance of the right auricle. The left cavities were atrophied, but otherwise natural. An opening about half an inch in diameter existed at the upper part of the *ventricular septum* common to the two ventricles and the aorta. The ascending aorta was nearly twice its natural size. The *ductus arteriosus* was open, and large enough to admit a goose-quill. The pulmonary artery was of its natural size at the entrance of the arterial duct, but gradually tapered towards the right ventricle, with which it communicated *directly* by an opening so small as scarcely to admit the introduction of a common probe. The *foramen ovale* was not closed, but evidently not sufficiently open to allow of any deleterious admixture of venous and arterial blood.
(*As quoted in the Bullet. de Sci. Méd.* August 1845.)

The extreme minuteness of the right ventriculo-arterial opening, and the absence of any valvular appearance at its mouth, led Dr. Bell to consider that, during life, blood passed from the pulmonary artery into the ventricle, and not in the contrary and usual direction. This opinion is certainly favoured by the fact of the existence of a regurgitant sound during the paroxysms.

[*] On the Congenital Malformations of the Heart, Edinburgh Medical and Surgical Journal, vol. xxxvi. p. 287; an essay to which (in common with most recent writers on malformations of the heart) I am indebted for much valuable information.

[†] Hufeland's Journal, Jan. 1837; quoted in Amer. Journ. of Med. Science, vol. xxi. p. 457.

VI.—*The auricular and ventricular septa perforated—The arterial duct closed.*

Many instances of this kind of malformation have been observed; and, in these, although the arrangement of parts has been in all physiologically similar, the degree and form of the congenital lesions have varied in an extremely remarkable manner. Thus, in one case, the arterial duct was pervious at its aortic end, though closed towards the pulmonary artery. In several instances there has not existed the slightest trace of an arterial canal; in others, the septum of the auricles has been found nearly complete, the foramen ovale being furnished with an efficient valve, while the ventricular septum was almost totally absent. In a fourth set, the main imperfection has existed in the auricular partition; and in a fifth, great contraction of the pulmonary orifice has been coincident with a very moderate amount of communication between the right and left cavities. These diversities of structure have clearly depended, in some cases, upon the period of intra-uterine life at which the lesion of the artery has occurred; in others, upon the degree of obstruction established in the vessel.

In the following example, observed by M. Caillot*, the malformation was only in a small degree removed from that which was found in the instances by Dr. Cheever and Dr. Bell, already cited; there the auricular and ventricular septa were imperfect, and the arterial duct pervious, but greatly contracted: here the heart was similarly malformed, and the canalis arteriosus was barely closed.

A girl, who had been cyanosed from birth, died with hydrocephalic symptoms at the age of 11 years and 7 months. The heart was found obtuse at its apex, and with a considerable deposit of fat on its surface; it was but little larger than natural. The *pulmonary artery* arose rather more to the left than usual; its coats were thin; its valves were cartilaginous, and so contracted together as scarcely to leave an aperture half a line in diameter. The aorta rose above the *ventricular septum*, which was deficient at its upper part; the vessel principally communicated with the right ventricle. This cavity was larger than the left, and its walls were stronger. The free edges of the tricuspid valve were cartilaginous. The *foramen ovale* was widely open. The *ductus arteriosus* was patent as far as the pulmonary artery, where it was closed by a cicatrix. All the veins were distended with blood; one of the cavæ was three times larger than the aorta. The upper part of the chest was contracted. The structures of the lungs were condensed, and were in an advanced condition of phthisical degeneration.

In the next examples which I shall quote there were found traces of a malformation similar to that observed by MM. Obet and Holst; viz. a communication between the pulmonary and left subclavian arteries. In these instances, however, the abnormal channel had become completely obliterated.

M. Caillot observed* the case of a boy, ætat. 3 years, who began to shew indications of morbus cæruleus at the age of two months. After death, the ends of his fingers only were of a livid colour, approaching to black, but spots like ecchymoses were spread over various parts of the body. The heart was placed transversely, its basis being situated unusually to the right. The right auricle was so distended as to equal the remainder of the heart in volume. The cavity of the right ventricle was small, and its walls of due thickness. The *pulmonary artery* was very narrow. There was a large opening in the *ventricular septum* above which the aorta originated. The *foramen ovale* was closed. The *ductus arteriosus* (branchial canal?), which was closed, extended towards the left subclavian. The aorta took a course above the right bronchus, and behind the trachea, towards the left of the vertebral column. The right carotid and subclavian arteries arose by separate orifices.

---

* Hasse, Diss. de Morb. Cærul. Lips. 1813; quoted also by Corvisart and M. Hein.

* Bullet. de l'Ecole de Méd. 1807, p. 24.

M. Duret* narrates the history of a child, 11 years of age, who was cyanosed from his earliest infancy; and, when sixteen months old, began to suffer from convulsive movements of the body, and fainting, during which attacks the face became completely of a violet hue. These paroxysms were subsequently produced by any unusual effort or mental emotion. Upon examination, the heart was found to be larger than natural; the aorta arose from the *septum of the ventricles*. The commencement of the *pulmonary artery*, which had but two sigmoid valves, was much contracted. Just above the valves the vessel was still more contracted; but, higher up, its diameter was larger: its coats were thinner than natural. The *foramen ovale* was open, and about four lines in diameter. The *canalis* arteriosus (branchial canal?), which was completely obliterated, terminated in the left subclavian artery, from which arose the carotid of the same side, while the right subclavian and carotid originated from the aorta by distinct openings.

Several cases of this kind have occurred in which no trace of an arterial duct could be discovered; a negative fact, it is true, but one of great interest and weight, coming, as it does, from a number of very accurate observers.

Sandifort has given† the history of a boy who suffered from cyanosis, dyspnœa, pulsations in the neck, a tumid and livid condition of the face, constant shiverings, occasional epistaxis, which relieved his symptoms, a foul state of the tongue, and fœtid breath. The urine was red, and the bowels costive. These symptoms commenced at the beginning of the child's second year, and continued to increase until the time of his death, which occurred at the age of 12 years. The lungs are described to have been found compressed by the enlarged heart, which was full of blood. The pericardium contained some serum; the right cavities were greatly enlarged. There was an aperture in the *fossa ovalis* which would admit a probe. The aorta arose from both ventricles over an aperture in the *septum*; the right ventricle was dilated. An excrescence on the valves of the *pulmonary artery* had so far closed the orifice of that vessel that it would only admit a small probe. There was no *ductus arteriosus*. The lungs were small, but not diseased.

Dr. Knox‡ relates the case of a female child, 4 years of age, who had remained in good health until six months after birth, when a blueness of the surface was remarked, particularly after any exertion, with constant difficulty of breathing. On inspection, the lungs appeared to be sound, though dark coloured. The *foramen ovale* was pervious and pretty large. The *pulmonary artery* arose from the right ventricle, its coats were thin, and it was about the size of a goose-quill in its diameter: it possessed all the characters of the artery, such as its valves, and its division into two branches. The aorta arose from both ventricles in such a manner that the ventricles communicated with each other, and with the cavity of the vessel. Not the smallest vestige of the *ductus arteriosus* could be discovered; it seemed never to have existed.

Dr. E. Lexis records* the case of a girl who was born apparently sound and strong, and who presented nothing remarkable for the first year after birth, except, now and then, a difficult asthmatic respiration. Afterwards, severe symptoms of morbus cæruleus presented themselves, the little patient becoming liable to paroxysms of strong suffocation, which she endeavoured to relieve by bending the body forwards. These symptoms were subsequently aggravated by convulsive movements, and painful darting sensations in the limbs. The pulsation of the heart was very strong, but irregular in quality and frequence, and sometimes so small that certain pulsations could not be distinguished. The breath was very foul. The appetite was irregular, and the thirst increased. She died at the age of 5¾ years. The left lung was adherent to the costal pleura; the pulmonary tissue contained a few tubercles. The heart was enlarged, the parietes of the right ventricle thicker than those of the left. There was an opening in the *auricular septum* large enough to receive a swan's feather, but closed on the left side by a valve. The aorta, of the usual size, originated above an opening in the *ventricular septum* large enough to admit the tip of the index finger. A probe passed into the *pulmonary artery* entered the ventricle with difficulty. Between the edges of the artery and the semilunar valves there were found a number of blind sacs, into which the probe passed more than half an inch. The communication of the pulmonary artery with the ventricle was about the diameter of a crow-quill. The *arterial duct* was absent.

In a fœtus of about 8 months, Otto† found the heart placed perpendicularly in the chest, and rather to the right. It was of the usual size, except that the right auricle was much dilated. The *foramen ovale* was large enough to admit a small pea. The left auricle was about a quarter as large as the right, and had no communication with the left ventricle. There was no *ventricular septum*; both sides of the heart were of equal strength. The auriculo-ventricular valve was well-formed. The aorta was situated more than usually to the right. The *pulmonary artery* had three semilunar valves, was about one-third as large as the aorta, and arose to the left of that vessel; it gave off two branches to the lungs, but did not form a *ductus arteriosus.*

---

* Quoted by Corvisart.

† Obs. Anat. Path. cap. i.

‡ Edinburgh Medical and Surgical Journal, vol. xi. p. 57.

* Lancet, 1845-6, vol. ii. p. 433.

† Seltene Beob. z. Anat. Phys. u. pathol. gehör. Bresl. 1816, p. 11. Quoted by Hein.

It will be observed that in at least three of these four cases in which the ductus arteriosus was absent, the pulmonary artery appears to have been imperfectly developed and generally diminutive, and not merely contracted at its orifice, as is usual in most of the forms of arctation of this vessel. The same peculiarity will also be noticed in some other instances of absence of the arterial duct, to which reference will be made in the next section.

It can scarcely be doubted that, in these cases, the contraction of the pulmonary artery occurred less as a result of structural lesion in the vessel, than as a consequence of the non-developement of the arterial duct; in fact, as a natural provision by which the entrance of an undue quantity of blood to the lungs during intra-uterine life was entirely precluded. In a fœtus where the pulmonary artery was extremely narrow, and the auricular and ventricular septa remained pervious, a ductus arteriosus would be scarcely at all required, of whatever importance such a communication might prove subsequently to the commencement of respiration. And there can be little doubt, that in the four cases related above, this canal became obliterated and absorbed at a very early period of intra-uterine existence.

I believe that the fact of the duct being absent in these instances, and pervious in those related by Dr. Cheever and Dr. Bell, is explicable upon the grounds which I have already hinted at:—in the class of cases just described, the non-development or early closure of the duct appears to have been the primary lesion, whence resulted the formation of a very narrow pulmonary artery, and the persistence of the auricular and ventricular openings; while, in the other examples, the principal lesion seems to have been disease of the pulmonary osteum occurring at a time when the arterial duct was fully formed, but while the inter-ventricular partition was still imperfect.

The condition of the ventricular portion of the heart in Otto's patient shews that the case was nearly allied to those instances already cited, in which absence or obliteration of the pulmonary orifice determined the non-developement of the septum cordis—leaving the efferent portion of the organ essentially in the condition of a single ventricle. In the four following cases there is every reason to believe that the arterial duct had been open previously to birth, though the obstruction to the pulmonary circulation subsequently to the commencement of respiration was not sufficient to prevent its closure at a later period. In this particular these cases differ from that by Dr. Mauran already noticed. I have before shewn the reasons why patency of the duct should be far more frequently observed in cases of obliteration of the pulmonary orifice, than in others where this opening is much contracted.

Dr. Farre[*] narrates the case of a person of the male sex, 22 years of age, whose figure was diminutive, and appearance and mental faculties puerile. The face was of a deep violet colour. In proportion to his height, the size of his abdomen and capacity of his thorax were large. When at rest, his breathing was easy, but rather quicker than natural; he occasionally took a full inspiration with perfect freedom. Whilst capable of taking exercise, slight exertions sufficed to bring on dyspnœa and cough. There was jugular pulsation; the superficial veins were enlarged and varicose. His ankles were œdematous, and there was sometimes vertigo. The pulse was observed, for a few weeks previously to his death, to range from 100 to 120; respirations from 26 to 28. The temperature of the hand was 98°, beneath the tongue 100°; while that of the room was 76°. The bowels were stated to be regular, except during the winter previous to his death, when some blood was discharged without any relief of symptoms. His urine was high coloured, offensive, and scanty. Death occurred rather suddenly (after a gradual failing of the muscular power), subsequently to taking a rather fuller meal than usual. On examination, the extremities were found to be slender: height 4 feet 3 inches. All the characters of puberty were wanting. Gangrene had commenced in one of the great toes. The pleuræ were universally adherent; the lungs were free from tubercles; their cellular tissue was coloured with blood. The veins of the chest were unusually congested, but the inferior cava and coronary veins only were dilated. The auricles were of due size; the valve of the *foramen ovale* was of due size, and efficient. The auriculo-ventricular orifices were narrowed; the right admitted the points of two fingers, the left the point of only one finger. The tricuspid and mitral valves were otherwise malformed. Both auricles opened into a ventricle, which was not only more capacious, but thicker in its walls than natural. The *pulmonary artery* arose from the superior and central part of this ventricle by a very narrow mouth.

---

[*] Op. citat. pp. 37-40.

of dense structure; its semilunar valves were concealed by a warty excrescence which grew from them, leaving a passage barely large enough to admit a small probe. The rest of the artery was of its proper size. The *ventricular septum* was wanting, and instead of the left ventricle, a pouch, impervious towards the left auricle, was continued from the right ventricle, and opened anteriorly into the aorta by a free orifice. The *ductus arteriosus* was closed. The left vertebral artery arose from the aorta between the left subclavian and carotid arteries. In the descending aorta no branch remarkable for its size appeared as low as the fifth intercostal. All the abdominal viscera were so greatly congested as to appear of a deep claret colour.

M. Vallete has related[*] the case of a female child born at the full period, who, for six months, remained in appearance healthy, when, all at once, the skin presented a blue tint, and the respiration became difficult. When six months old, convulsions took place, and were succeeded by hemiplegia of the right side, which, however, gradually decreased and finally disappeared, still leaving that side somewhat weaker than the opposite. The cyanosis persisted, increasing when the patient ran or walked quickly, and being deeper on the right than on the left side. At the age of 6 years the patient caught cold, which produced bronchitis and fatal pulmonary congestion. It was found that the ventricular parietes were, on both sides, about two lines in thickness. A large communication, through which the thumb could easily be passed, existed between the ventricles—the circumference of this opening was rounded and smooth; the *septum* was only four lines high, the aortic orifice was normal, and situated at the internal and upper part of the circumference of the inter ventricular opening. The orifice of the *pulmonary artery* was separated from that of the aorta by a small eminence which formed the upper part of the circumference of the inter-ventricular opening. The *pulmonary artery* was about half the size of the aorta; neither it nor its orifice presented anything irregular. The auriculo-ventricular orifice was single, common to the auricles and ventricles, situated at the base of the cavity of the ventricles, behind the aorta and pulmonary artery; it was furnished with a large triangular valve, the base of which was inserted into three-fourths of the circumference of the opening, and the summit of which was fixed, by means of small fleshy columns, to the posterior walls of the ventricles. The valve was large enough to close the orifice completely. The auricles communicated freely by two openings.

M. Hein relates[*] the case of a lad, æt. 16, who was very severely affected with cyanosis, having been livid from the earliest period. His chest was narrow, and his breathing short and difficult. There was strong palpitation of the heart, the pulse was 100 and hard, becoming weak and still quicker when oppression was greater, and latterly increasing still more in rapidity when the symptoms were alleviated. He had suffered from copious hæmoptysis, but died from accumulation of mucus in the air-passages. The lungs were found extremely congested, flaccid towards their bases, and small compared with the size of the heart. The left contained a vomica. The bronchial glands were hard and enlarged. The heart was unusually large. There was merely a vestige of a *ventricular septum*. The two sides of the organ were of nearly equal thickness. The valves of the *pulmonary artery*, coalescing, formed a little ring, about three lines in diameter, which projected into the artery. There were three openings in the valve of the *foramen ovale*. The *arterial duct* was closed.

The most extreme degree of this kind of malformation was observed in a heart shewn to Dr. Farre by Mr. Lawrence (in the collection at St. Bartholomew's). Here the venæ cavæ and pulmonary veins opened into their respective auricles, but the *auricular septum* was very imperfect, consisting only of a small muscular band, which left a large foramen ovale without a valve. The *septum of the ventricles* was altogether wanting, so that the ventricle communicated with the auricles by a single ostium, around which a valve was attached. The aorta and pulmonary artery, the entrance of the latter being somewhat contracted, arose side by side from the left part of the ventricle. The history of the case was unknown; but, from the size of the heart, it appeared probable that the child had lived some months.[†]

Cases of this class are found to vary exceedingly with respect to the size and form of the inter auricular communication: in some, the septum has been found either wholly deficient or merely in a rudimentary state, while in many others it was evident that the process which closes the foramen ovale subsequently to birth had been commenced in the natural manner, and had been arrested only at the period when it was just verging upon completion. The two following cases are fair examples of the extreme degrees of this species of malformation.

In a female child whose complexion was always more or less blue, who suffered from difficulty of breathing, and died at the completion of her first year, Mr. Ring found that the heart was furnished with two descending venæ cavæ, one of which terminated in the right, the other entering the left side of the auricle (which was single, the *auricular septum* being totally absent), with the ascending cavæ. The *septum of the ventricles* was also remarkably imperfect. The aorta arose from both ventricles. The *pulmonary artery* was much smaller than usual.*

---

[*] Gazette Médicale, and Lancet, cir. Feb., 1845.

[*] De istis Cordis Deformationibus quæ Sanguinem Venosum cum Arterioso Misceri permittunt. Gotting. 1816, p. 37.

[†] On Malformations of the Heart, pp. 30-1.

As a contrast to this case we may take that described by Dr. Nevin.† A boy, æt. 10 months, first began to suffer from symptoms of blue disease about a month subsequently to birth. Death occurred during a violent paroxysm. The heart was found larger than usual; the coronary veins were remarkably turgid; the aorta, at its origin, was considerably enlarged, and arose equally from both ventricles. The *pulmonary artery* was remarkably contracted, and its valves were firmly attached by their apices to the internal coat of the artery, and appeared somewhat ossified as their bases. The *arterial duct* was closed. The right ventricle was considerably enlarged. The *foramen ovale* admitted a large probe. The carotid and subclavian arteries on each side arose by separate trunks.

In other examples narrated in this section, the inter-auricular communication seems to have been as narrow as in the instance by Dr. Nevin, and perhaps even narrower. Indeed, the existence of a very wide communication between the auricles appears in these cases to be a somewhat rare exception to the general rule, and the great width of the aperture may, in some instances, be attrbuted rather to dilatation occurring subsequently to birth, than to an original arrest of development.

The following are interesting examples of the varieties, both in the anatomical condition of the parts, and in the resulting symptoms, which cases of this description are wont to present.

Dr. John Crampton‡ relates the following instance:—

A boy had, from his birth, been subject to palpitation, attended with pain in the left side. His complexion was livid and sallow; the whole surface of his body was extensively anasarcous; his breathing was very laborious, and he could not lie on either side, but was easiest sitting up. The pulse at the wrist was 140, small, and synchronous with the heart's action; but latterly both became irregular and intermittent. The measurement of the right side of the thorax exceeded that of the left by half an inch. A very loud *bruit de soufflet* was distinctly audible in every part of the thorax, and in the neck. Latterly he suffered from diarrhœa. His symptoms were, on one occasion, temporarily relieved by a profuse perspiration. Death occurred from exhaustion at the age of ten years. Attached to the right ventricle there was found a supernumerary cavity which communicated with the pulmonary artery. This cavity also communicated with the right ventricle by an opening large enough to admit the little finger, and formed under the columnæ carneæ of the ventricle. The *pulmonary artery* was perfectly destitute of valves; its lining membrane, at the usual situation of the valves, appeared a little puckered; at this spot the artery was contracted, but above, it was considerably dilated. The *septum of the ventricles* was imperfect, and the *foramen ovale* patent.

Dr. Todd, who also examined this case, attributed* the formation of the supernumerary cavity to a partial dilatation of the infundibular portion of the right ventricle in consequence of the obstruction at the pulmonary orifice. I shall presently have to quote other cases which bear a very close resemblance to this.

Mr. A. Napper has related† the case of a boy, æt. 5 years and 7 months, who began to be the subject of cyanosis and its attendant symptoms subsequently to a fall which he suffered at the age of six months. He died with symptoms of acute hydrocephalus. On examination of the brain, extensive ramollissement of the right hemisphere and serous effusion were found to exist. The lungs were extremely small and flaccid, and of a bright crimson colour throughout. The heart was of normal dimensions; both ventricles were contracted; both auricles were extremely distended with blood. In the situation of the *foramen ovale* there was an opening about half an inch in length and a line in breadth; its valvular form rendered it probable that this opening did not ordinarily admit of the passage of the blood. The aorta communicated equally with both ventricles. The ventricular orifice of the *pulmonary artery* was much contracted, scarcely admitting the large end of a common blowpipe. The sigmoid valves were exceedingly small, but otherwise perfect.

Mr. John C. Bloxham describes‡ the case of a girl who died at the age of 3 years, having been the subject of cyanosis almost from birth. The heart was found lying transversely in the chest, and of an enormous size compared with the growth of the child.

---

* Medical and Physical Journal, vol. xiii. p 120.

† Duncan's Medical Commentaries, vol. xix. p. 326.

‡ Trans. of the Dublin College of Physicians, 1830.

* Cyclopædia of Anatomy and Physiology, vol. ii. p. 634.

† Med. Gaz. vol. xxvii. p. 793.

‡ Ibid. vol. xv. p. 435.

The right auricle was enlarged and hypertrophied; the left appears to have been small; the *foramen ovale* would have admitted a goose-quill, but was furnished with a valve. The thickest portion of the walls of the right ventricle measured a quarter of an inch; of the left nearly half an inch. The aorta took its origin nearly equally from both ventricles, and was unusually large. The *pulmonary artery* communicated with the right ventricle; its parietes were extremely thin, and it was altogether so diminutive that its existence was discovered only by tracing its branches backwards from the lungs. "It was perceived on the posterior surface of the heart collapsed, and bifurcating immediately on its exit, so that the trunk was not, in any part of its circumference, above a line in length." It was only furnished with two valves. The aorta, which was unusually large, arose above the septum, and communicated more freely with the right ventricle than with the left. The tricuspid valve was thickened, and callous at its margin. The pericardial, pleural, and abdominal cavities contained serous effusions. The lungs were tubercular, contracted, and adherent to the ribs and spine. The liver was much enlarged, encroaching on the chest.

Dr. Hope details the case of a girl, æt. 8 years, whose lips, nose, cheeks, palpebræ, hands, and feet, were of a violet colour; the tongue and mouth still darker. There was dyspnœa on the slightest exertion, and cough only when hurried; the sternum was very prominent; great sensibility to cold, headache, vertigo, drowsiness, and sluggishness. Pulse very small and weak; and when the patient was hurried it was irregular, intermittent, and unequal. A very loud, hissing, superficial, bellows murmur was heard in the præcordial region, synchronous with the first sound of the heart; the diastolic sound was healthy, or nearly so. The child died of a chronic abscess in the brain. The heart was one-half larger than natural; the walls of the right ventricle were thickened to half an inch; the cavity was slightly dilated, and the *pulmonary orifice* contracted to the size of a goose-quill, whilst a common opening from the right ventricle, admitting the index finger, existed into the aorta and left ventricle. The left ventricle was one-third of an inch thick, and its cavity about natural. An oblique passage, admitting the handle of a scalpel, existed between the auricles. The lungs were rather flaccid, imperfectly crepitant, and universally gorged with black blood*.

M. Huet furnishes an instance† where he found the *pulmonary artery* very narrow in a patient 13 years of age. The aorta arose from both ventricles. The *foramen ovale* was open; the arterial duct closed.

The preparation numbered 1382^{48} in the collection at Guy's Hospital affords an interesting type of this kind of malformation. It is the heart apparently of a young adult in which there are evident traces of universal pericardial adhesion and of inflammation (probably of old date) affecting the substance of the organ, the presence of interstitial deposit being very apparent, especially in the walls of the right ventricle. The valves of the *pulmonary artery* are fused into a conical canal, upon the upper surface of which slight traces of the free edges of the curtains are perceptible; the artery above is about the natural size. A singularly free communication exists between the ventricles; the right ventricle is rather larger than the left, and its walls are slightly thicker. The muscular tissue of the imperfect ventricular septum is remarkably developed. The right auricle is very large; the left greatly contracted. The *foramen ovale* appears to be unclosed, but well defended by a strong valve.

It will be observed that, in a considerable proportion of the preceding instances, cyanosis is mentioned to have occurred (as it generally does in cases of congenital imperfection of the heart) at a period of some days or months subsequently to birth*. Dr. Quain has very justly argued† that, in cases of this description, the accession of cyanosis shortly after birth is immediately determined by the commencement of the process of closure in the arterial duct: it might also have been added, and in the foramen ovale. A large proportion of the instances above related, as well as many of those which will be subsequently adduced, afford strong corroboration to this view. In the five cases where permanence of the arterial canal was coincident with arctation of the pulmonary orifice, the passage of the duct had become narrowed: in the two instances where the branchial canal remained pervious, this channel was also remarkably narrow. In 13 out of the 27 cases in which patency of the foramen ovale was found to coexist with narrowing of the pulmonary orifice, there were found evidences that a process of conraction in the inter-auricular opening had proceeded to a certain, and, in most of the instances, to a very considerable extent. Besides the instances in which the arterial duct was observed to be extremely contracted, there were also twenty cases where the auricular septum remained to a greater or less degree pervious, in which no direct communication existed between the aorta and pulmonary artery. It is certainly observable, that, in the majority of cases where the foramen ovale and ductus arteriosus remain permanently open in consequence of congenital obstruction to the circulation, an effort is made by nature to close these apertures by the usual vital processes; and, although this effort proves abortive, it is sufficient to produce a certain amount of contraction in the abnormal passages; to which contraction the accession of the symptoms of obstruction to the circulation, and of morbus cæruleus during the earlier months of infancy, is, I believe, in most cases referrible. This proposition will receive still further confirmation when we arrive at the consideration of the facts upon which the now generally recognised doctrine of the causes of cyanosis rests.

---

* Treatise on Diseases of the Heart, p. 468.

† Bulletin de Sc. Méd. t. ii. p. 72, 1808.

* This happened in twelve of the cases. In most of the other instances the precise time at which cyanosis appeared is not mentioned. In the remaining examples (four) it is reported to have existed from birth; but this statement does not appear to have been, in all those cases, the result of actual observation on the part of the reporters. I believe it to be an extremely rare occurrence for an infant to be born in a condition of true cyanosis, if, indeed, such a circumstance has ever occurred at all; but cases have been observed in which lividity, which afterwards became permanent, appeared very shortly after the commencement of respiration.

† Dublin Medical Press, vol. viii. p. 88.

In the next class of instances of narrowing of the pulmonary artery to which I shall have to refer, the ventricular septum was perforated, but no communication existed either through the foramen ovale or the arterial duct.

[To be continued.]

SICILIAN QUARANTINE REGULATIONS.

THE subjoined paragraph furnishes as good a commentary on the absurdities of the quarantine system in some of the Mediterranean ports, as need be desired. While the new rule is promulgated, the means of evading it are coolly suggested. The Neapolitan government objects to the direct importation of what it regards as contagion, but admits it, provided the vessel calls at Malta or Cagliari in Sardinia!

The government of the Two Sicilies has ordered all vessels arriving in the Neapolitan and Sicilian ports, that have passed through the Straits of Gibraltar, to be placed under quarantine for seven days, and, if the hatches appear to have been opened, fourteen days; in the latter case the cargo to be sent to the lazaret. The quarantine, however, may be avoided by vessels calling at Malta, or the port of Cagliari in Sardinia, where, for a few dollars' expense, and an hour's detention, they may obtain free pratique.

A CASE OF

POISONING BY NITRIC ACID.

ENTIRE DESTRUCTION OF THE STOMACH: DEATH AFTER TWENTY-THREE DAYS.

By DR. F. A. B. PUCHELT,
Professor in the University of Heidelberg.*

CASPAR R——, a locksmith, aged 52, having long led a life of intemperance and extreme wretchedness, determined on committing suicide, and for this purpose procured two ounces of diluted nitric acid (Scheidewasser), which he swallowed about three o'clock in the afternoon of the 19th of May, 1845, having just previously eaten a portion of cheese. Immediately afterwards he was seized with severe burning pain in the mouth, fauces, and œsophagus. Vomiting also shortly supervened, and the greater part of the nitric acid swallowed was probably thereby removed from the stomach. After remaining several hours alone, the man came and informed the police of what he had done; whereupon he was at once taken to the hospital and seen by an assistant, who was unable to detect any symptoms showing the recent administration of poison, or any which required immediate attendance. He was, therefore, not admitted, but was removed to prison, where an oily emulsion was administered to him, and where he passed a sleepless night, bitterly repenting his rash act, and tormented by the fear of death. On the afternoon of the following day, the burning pains in his mouth being worse, he was admitted into the hospital, and it was not until the 21st, thirty-six hours after swallowing the poison, that Dr. Puchelt saw him, and that an accurate note of his condition was taken. The mucous lining of the mouth and pharynx was covered with a white shreddy membrane, which could be readily peeled off; parts were already abraded. A similar appearance was presented by the tongue. The soft palate, and the tonsils, were swollen, painful, and vascular. *Externally* there were several yellow stains of the cuticle about the mouth, especially upon the upper lip. There was considerable difficulty in swallowing, and fluids only could be taken. Respiration was laborious. There was some tenderness on pressure over the epigastrium, though less than might have been expected: the abdominal parietes were rather hard and retracted. The pulse was small and not accelerated; the intellect clear; the bowels acting properly; and the urine quite natural. In short, his general condition was so little deranged that, although there was unequivocal evidence of poisoning by nitric acid, yet there was reason to hope that but little real injury had been inflicted on the stomach. Thirty-six hours having elapsed since the poison was taken, it could not be expected that the ordinary antidotes for nitric acid would be of much service: a few leeches were therefore applied over the epigastrium, an oily emulsion administered, and directions given that he should drink plenty of cold water, and rinse out his mouth and gargle his throat with lukewarm water. During the following few days his symptoms varied; occasionally he suffered rather severe pains in the region of the stomach, but these were relieved by the repeated applications of leeches and warm fomentations to the epigastrium, and by the internal employment of emulsions and other such remedies. Indeed, after the eighth day, when his mouth and throat had become better, a little appetite returned, and a portion of light food was taken and tolerated. Nevertheless, the patient's strength gradually diminished, his aspect became more unfavourable, his body emaciated, and on the 3rd of June his stomach rejected the food which had been taken: on the 4th a little blood was found mixed with his stools. On the night of the 5th (seventeen days after swallowing the poison), the pains in the stomach became more severe, and were accompanied by great uneasiness and frequent nausea, which shortly terminated in violent vomiting. The vomited matter diffused a highly gangrenous odour, and consisted in part of black fluid blood, and in part of a broad foul-smelling membrane, which when spread out was about a foot in breadth. This membrane was marked with black spots as though burnt, and was perforated with numerous small and large apertures. On closer examinations blood-vessels and their ramifications were distinctly recognized in it: its general structure was fibrous; very little epithelium was found on it. Shortly after the vomiting, an evacuation through the bowels took place; a large quantity of black, putrid, and foul-smelling blood was contained in the stools. After this the patient became greatly distressed and exhausted, and talked frequently of his death. His pulse was small and frequent; the pain in the epigastrium more severe, though not much aggravated on pressure. The pain was relieved somewhat by oily emulsions and opium; and the patient was then able to take a little animal broth and milk. The night of the 7th was a sleepless one, and on the 8th the vomiting returned, a quantity of black putrid blood being thrown up: a discharge of the same kind of foul-smelling blood took place also from the bowels. The patient himself emitted such a putrid odour, that no one could remain near him for any length of time. The extremities were cold; the pulse very frequent, small, and feeble; and the eyes dull and lustreless. From time to time the patient became delirious, and talked of his approaching death. The vomiting of bloody matter frequently recurred. Nevertheless the man continued to live on until the morning of the 10th, when he died about 6 A. M.; having lived, therefore, 23 days after taking the poison, and 76 hours after the discharge of the membrane from the stomach.

---

* Communicated by the Author, and translated for the LONDON MEDICAL GAZETTE.

The body was examined about 24 hours after death, and the following appearances observed:—In the cavity of the cranium, the dura mater and its sinuses were found healthy; the arachnoid whitish and opake, containing a little fluid; the brain generally healthy, rather a large quantity of fluid in the ventricles. In the cavity of the chest, the lungs were found emphysematous in parts, especially the left; a few tubercles were deposited in the apex of each: the left was adherent to the walls of the chest. The heart was normal, and covered externally by a layer of fat. The left ventricle and the aorta contained coagula of blood. When the abdominal cavity was opened the intestines were seen first, being pushed forwards by the left lobe of the liver, which extended considerably over to the left side. The peritoneum was healthy; no foreign matter found in its cavity. At the first glance nothing could be seen of the stomach; but upon lifting up the left lobe of the liver, and separating it from the transverse colon to which it was adherent, an open cavity was observed, which occupied the situation of the stomach, and extended from the œsophagus to the duodenum; a finger could be quite readily passed from this cavity into the orifice of the duodenum. The walls of this cavity were formed, in front, by the posterior surface of the liver and the transverse colon; below by the remains of the coats of the stomach; behind, by gangrenous, half-dissolved, and putrid portions of the same coats; on the left, by the spleen and another portion of the coats of the stomach. The whole of that portion of the stomach, therefore, which forms the anterior wall, the lesser curve and the upper part of the posterior wall of the organ, was completely absent. Yet, although a considerable portion of the coats of the stomach was wanting, none of it had passed into the peritoneal cavity, for the free margin of the liver was adherent to the transverse colon; the posterior wall and larger curvature still remained, and the other undestroyed portions of the coats were adherent to the spleen and diaphragm; so that in this way, through the medium of the neighbouring organs, the continuity of the stomach was still preserved. The liver and the transverse arch of the colon were held together by tough, probably old, adhesions, and this union was continued from where the liver formed the anterior wall of the stomach, to the pylorus. The concave surface of the left lobe of the liver, where in contact with the remains of the stomachal cavity, was covered with a dirty, pulpy, blackish-green mass, of a highly fœtid odour; its surface was rendered uneven by it. A similar kind of matter was contained in the cavity of the stomach. The peritoneum covering the liver was uninjured; of that of the stomach no traces were found. The liver itself, as well as the gall-bladder, was quite healthy. The portions of stomach near the pylorus were perforated with holes; a blunt instrument passed through these came in contact with the transverse colon. The remainder of the stomach was so soft that it broke down under the slightest pressure, yet still remained adherent to the spleen and the diaphragm. The structure of the duodenum and of the rest of the intestines offered nothing peculiar; yet the whole of the intestines, especially the transverse colon, contained a large quantity of bloody matter. The mucous membrane of the œsophagus was found removed in its whole length, leaving bare the muscular fibres, some of which were red, others black; no stricture or perforation was found. The papillæ at the apex of the tongue were prominent, and covered with exudation. The kidneys and urinary bladder were healthy; each was surrounded by a quantity of fat.

⁂ This case is chiefly remarkable in shewing the extraordinary manner in which the vital powers endeavour to repair the loss of a large portion of a most important organ. It is extraordinary that, under such an extensive destruction of the stomach, the individual should have survived for so long a period as twenty-three days.

THE SCOTCH EPIDEMIC FEVER OF 1843-4.

By John Richard Wardell, M.D. Ed.

Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 200.]

No. VII.

Respecting the pain so frequently complained of in the left side, such might mostly with correctness be attributed to disease of the spleen, which was so unusually common in the fever. Were we but possessed of more decisive knowledge as to the true nature of the spleen in the animal economy, its pathological conditions would be better understood. If we are to consider, with most physiologists, that it acts as a kind of reservoir to the circulation carried on in the abdominal viscera, and that its distensible qualities avert the evils which might accrue to certain of these visceral organs from an irregular distribution of blood, we can at once perceive the manner in which it becomes enlarged in intermittent fever; and the same line of reasoning is equally applicable relative to the epidemic, seeing that the latter bore certain resemblances to the former. In an intermittent the powerful fits of shivering determine the blood from the surface in anormal quantity to the internal parts, and, as before stated, this viscus, under such circumstances, is capable of taking up a large quantity of superfluous vital fluid, which is thus thrown upon those organs; and which, were it not for the provision that nature has thus supplied, must have acted much more deleteriously; and, as rigors were so exceedingly common in the epidemic, as also relapses with other features similating the intermittent type, it seems a plausible inference to be arrived at, that the spleen was morbidly enlarged from the operation of causes pretty similar to those producing its congestion in an intermittent.

Some physicians have contended, amongst whom may be named M. Piorry, that an inflammatory condition of this organ is the sole and prime origin of intermittent fever, and that the whole of the phenomena presented by that form of the disease originate in, and immediately depend upon, such morbid condition. This localistical doctrine, however, is manifestly untenable, because an intermittent may be apparent previous to a morbid enlargement of the spleen; because the diseased condition of it is not by any means uniformly in proportion to the degree of intensity of the fever; because its inflammatory state in an intermittent is often exceedingly doubtful, it being in general merely congested, and because we are not aware that any remedial means that we possess, which if singly directed to that organ, could abruptly check the progress of the fever—a circumstance that ought to follow as a natural sequence if the views of M. Piorry and others were correct: again, the curative measures employed in cases of acute splenitis, that were noticed in the seven days' fever, did not cut short the pyrexial symptoms of the idiopathic fever—did not prevent a relapse, nor in any way materially alter the general features of the distemper.

Acute inflammation of the spleen is a rare disease, more especially now that intermittent fever in this country has become so uncommon, and acute idiopathic inflammation of its peritoneal covering is so very seldom noticed as to be considered by some authors as never occurring.[*] Its most common form of disease is a mere apyrexial state of congestion, or a chronic inflammatory action that may continue for some years,[†] which generally terminates either in a black degenerated mass, of soft pulpy consistence,[‡] or, which is the most seldom, ends in suppuration: this last form, however, is but very rarely observed.[§] In the seven days' fever, several and some well-marked cases of acutely inflamed spleen came under my notice, and some of these went on to a mortal termination, or at least seemed importantly concerned in the induction of death. I then saw many instances where the organ had increased to three or even four times its natural size,[||] and in my own humble opinion, there is little doubt, that this organ was more frequently affected than has been noticed in any recent febrile visitation. Splenic disorder is generally and with much correctness considered as a secondary and not a primary disorder—such being dependent, as a justly celebrated writer observes, "upon deficient energy in the system, particularly of the vital organs."[¶] Between the liver and the spleen there is a very remarkable sympathy, and there is mostly, if it be not said uniformly, demonstrable disease of the former associated with that of the latter. We are accurately aware that between some organs of the body (and in some instances when they are remotely located from each other) there are peculiar and unaccountable sympathies, as between the mucous membrane of the digestive canal and the cutaneous tissue—the testes and larynx—the uterus and mammæ, &c.; and, undoubtedly, there is very great sympathy between the viscera now considered, by which may in some measure be accounted for their simultaneous affection.

---

[*] Abercrombie, &c.

[†] Franc, Lieutaud, Diemerbroeck.

[‡] Lossius, Crendal, and in the Calcutta Transactions.

[§] Portal, Jacquinelle, Abercrombie, Grotanelli, &c.

[||] I am aware that the spleen is sometimes considerably more enlarged than what is mentioned in the text; yet in those cases it has generally been preceded by, or accompanied with, intermittent fever; and under such circumstances it has gained an incredible size, instances of which are mentioned by Lieutaud, Franc, Wardrop, L'Hermite, &c.

[¶] Annesley on the Diseases of India.

Dr. Henderson, at an early period of the seven days' fever, had witnessed no less than eleven well-marked cases of acute splenitis, and if particular attention had been given, in order to discover the exact ratio in which they occurred, there is little doubt that the complication in question was very high, and indeed so much so as to render this affection, and its unusual frequency, one of the distinguishing peculiarities of the distemper. Dr. Cormack, in his work, notices the complication, but concludes that the organ was *not* inflammatorily distended, but in a state of mere congestion. There were certain cases presented to my own inspection where decided pyrexial symptoms were apparent, and only referrible to the local cause, because they become manifest during the remission—after the idiopathic fever had been clearly and effectually resolved by the usual critical sweat, a fact evidently proving that unequivocal inflammation was *sometimes* witnessed in this organ, although it must be allowed that simple congestion was by far its most frequent condition ; yet what is endeavoured to shew is, that its actual inflammation was not very uncommon in this fever. In those cases which I saw there were sharp lancinating pains, and dulness on percussion over the splenic region, and this dulness would sometimes extend over a space three or four times as large as when the organ is of its natural size. In some few instances the dulness reached so far as nine inches from the spine to the latero-anterior aspect of the thorax, and six inches in perpendicular. In these cases cupping and leeches, with calomel and opium, for the most part quickly reduced the circumscribed dull sound; and I have seen the line of dulness (after having been mapped out by means of the pleximeter) reduced to an inch or an inch and a half in diameter in the course of twenty-four hours;[*] and with such diminution of bulk the symptomatic fever has declined in a proportionate degree, evidently proving that the organ was inflammatorily distended. That the affection so common to this viscus during the epidemic was not at all times merely congestion, the following testimony may be cited from an account given of the fever by a physician who witnessed much of the distemper:—"That the enlargement of the spleen," says the writer, "was not the result of ancient organic disease was abundantly evident from the usually rapid decline which followed leeching the hypochondrium, and the other remedies which were used. In some cases the affection occurred during the existence of a paroxysm of the fever; in others it happened after the paroxysm was over, and was ushered in, and accompanied by a proper symptomatic fever, differing from a paroxysm of the epidemic fever in this, among other circumstances, that it yielded speedily to the local remedies that were addressed to the spleen, and subsided along with the latter[*]." The foregoing statement at once proves the nature of the affection so frequently noticed with regard to this viscus, although, as before advanced, its active inflammation might be considered as the exception, and simple congestion, to a greater or less extent, the rule. An instance illustrative of this complication may here appropriately be inserted.

CASE V.—*Acute splenitis.*

Mrs. Leeson, æt. 38, married; had eleven children; spare habit; admitted March 29th, 1844. States that she became affected with headache, pains in the limbs, and rigors, on the evening of Monday last (25th). One of her daughters had the epidemic, and is at present in the wards. Has had occasional sweats since the accession of her illness, and also at various times had sickness and vomiting. Has not complained of any epigastric tenderness before to-day.

---

[*] In illustration of the sudden manner in which the spleen enlarges and diminishes, the following quotation may here be cited:—"One of the most singular facts in the pathology of the spleen is the very rapid manner in which enlargement of it takes place, and the equally rapid manner in which it subsides. Some of the cases of this kind which I have seen appeared so very extraordinary that I suspected some fallacy until I found similar cases described as *of frequent occurrence* by writers on the diseases of India. Several years ago, I saw, along with Dr. Combe, of Leith, a seaman who had contracted ague in England a few weeks ago, and had returned to Leith with the disease going on in the usual manner. In the left hypochondrium there was a firm defined tumor, arising from beneath the margin of the ribs, and projecting downwards several inches. We agreed that our first object was to arrest the fever by the usual means, leaving this remarkable tumor for future consideration; but on returning about a week after, I found that the fever had been easily arrested, and that the tumor was entirely gone."—*Dr. Abercrombie on the Diseases of the Stomach and other Abdominal Viscera*, p. 411.

[*] Craigie's Edinburgh Med. and Surg. Journ. Jan. 1844.

April 3d.—On pressure over epigastric and hypochondriac regions, much tenderness is experienced. Percussion over left hypochondrium for 4½ inches vertically is dull, and the dulness extends forwards from the vertebræ along the lower margin of the hypochondrium to the epigastrium Nothing can be detected below the margin of the ribs. On the right front the hepatic dulness begins at the fifth rib, and extends below the margin of the hypochondrium. A particular examination cannot be attempted on account of the acute pain which is experienced on the least pressure. Has had some diarrhœa from the commencement of her attack, and yesterday had frequent calls to stool, with tenesmus, without any passage of fæces, but some greenish mucus was voided. During last night was only once called to stool, and the evacuation consists of mucus, though somewhat mixed with fæculent matter. No tenderness in abdomen, except as already specified. Urine said to be in good quantity, but not kept; much thirst; tongue dry; skin universally of a dingy yellow, which appearance first became manifest the day before yesterday. Is languid and feeble; no delirium; was leeched at the epigastrium, which produced slight relief.

℞ Nitratis Potassæ ʒj. ; Aquæ, ℥vj.
Sit. Mist. Cap. ℥j. 4ta. q. q. horâ.
Habeat. Sp. Comminis, ℥iv.

April 4th.—Continued much in the same state until a few hours before death, which occurred at six o'clock this morning. Had no coma nor delirium, and was quite sensible until four o'clock.

Sectio Cadaveris, April 5th, 1844,
33 *hours after death.*

Body a good deal emaciated; surface suffused universally with a dingy yellow.

HEAD.—*Brain :* Superior surface of dura mater tinged here and there with yellow patches. No unusual vascularity of pia mater; nor does the cut surface of the brain present any unusual number of bloody points. The serosity in ventricles amounts to ʒi¾.

THORAX.—*Lungs :* The left lung is considerably smaller than the right, and firmly connected to the parietes of the chest throughout by old adhesions; it is a good deal congested with blood, but crepitates freely on pressure. The right lung is free from adhesions, and is somewhat emphysematous at its apex and anterior surface. On its posterior aspect there is a good deal of congestion, but crepitation is distinct. The apex and upper lobes generally contain a considerable number of calcareous and putty-like concretions.

ABDOMEN.—*Liver :* This organ projects considerably beyond the right hypochondrium; weighs 5 lb. 4 oz.; its colour is uniformly of a pale ochre yellow. Blood oozes from fresh cut surfaces, but only from considerable vessels; on pressure, a little blood, mingled with a yellow fluid, may be expressed generally when a fresh section is made; its consistence is soft, and very friable. *Gall-bladder* is flaccid, but contains a considerable quantity of tenacious, viscid, dark-greenish looking bile. *Ducts* pervious. *Spleen* is loose in its situation, and presents no appearance of lymph on its surface. The appearance of a section of it has a great resemblance to raspberry jam; easily lacerable, and of soft consistence, but is not diffluent; scattered throughout its surface there are a number of minute whitish specks; weighs 20 oz. *Kidneys* are somewhat flaccid, elongated in their form, and smooth upon their surface; of a pale yellow colour; cortical substance presents its usual characteristics, nor is it contracted in depth.

Other organs and structures do not present any uncommon or diseased appearance.

REMARKS.—In the above detail of this woman's affection, we see that the symptoms of the disorder were, at the invasion, of the ordinary character. There was pain produced by pressure over the hypochondria and epigastrium; percussion demonstrated a morbid extent of dulness over the splenic region, correctly indicating the great size of that organ. The pain and tenderness extending from the right hypochondrium to the epigastrium denoted a diseased condition of the liver,—a circumstance of some consideration, insomuch as disease of the spleen is well nigh always, and it might be said invariably, associated with a morbid state of the hepatic viscus.

The post-mortem appearances are interesting, insomuch as they fully verify the diagnostic symptoms. The brain and its membranes presented very nearly the ordinary character, and the serous exudation was found in unimportant quantity. The appearance of the lungs, though manifesting a morbid condition of long standing, was by no means such as to induce a mortal issue. The left was considerably smaller than the right, and firmly bound to the chest by old pleuritic adhesions; but we know that life can be supported, and it might almost be said that health is not incompatible, with a considerable obliteration of the pulmonary organs, and individuals have been known to live many years when the respiratory function was carried on by one lung alone;—again, those who have had much opportunity of making post-mortem examinations are well aware of the very frequent occurrence (and often when quite unsuspected, existing to a considerable extent) of organized bands of lymph firmly uniting the pleura costalis with the serous investment of the lungs, so much so that it might be deemed that such were capable of seriously interfering with the natural functions of these organs. The congestion spoken of might in a great measure, if not solely, be attibuted to gravitation, and was perhaps to a very much less extent during life. The liver, it is seen, weighed more than its ordinary weight. The fluid that oozed from the surfaces of fresh sections was of a character similar to that which is generally observed when there is a redundant secretion. The cut surface was of a pale ocherish yellow, as if blended with an olive tint, and the organ itself was soft and friable. The gall-bladder was preternaturally distended with an increased quantity of bile, although there was no obstruction in the ducts,—a fact shewing that its contents were given off in a morbidly increased manner. The spleen was loose and resistless to the touch. Its almost diffluent consistence, and weighing from three to four times that of its natural size, readily demonstrated the degree of morbid action with which this organ had been affected. The whitish spots were undoubtedly small depositions of pus; and from the appearance of these pustules it is plausible to suppose that, had the patient survived for some time longer, the organ might have gone more completely into the suppurative state, although such termination, as previously asserted, is exceedingly uncommon.

EXEMPTION OF THE CHEROKEE INDIANS AND AFRICANS FROM INSANITY. PREVALENCE OF MANIA IN THE COLDER REGIONS.

Dr. Lillybridge, of Virginia, who was employed by the government as the medical officer to superintend the removal of the Cherokee Indians, in 1827-8 and 9, and who saw more than twenty thousand Indians, and inquired much about their diseases, informs us that he never saw or heard of a case of insanity among them.

Dr. Butler, who has been a devoted missionary and physician among the Cherokees for about a quarter of a century, informs us in a recent letter, that he has as yet seen no case of decided insanity among them, though he has occasionally seen them delirious when sick of other diseases; and adds that an intelligent chief, a man now eighty years old, told him that "he had never known a case of insanity among his people, such as he had seen at the hospital at Philadelphia." Insanity is rare, we believe, among the Africans. Cinquez, and others of the Amistad Negroes, when in this country a few years since, visited the Retreat of the Insane, at Hartford Ct. and saw many of the patients there. They informed the writer of this article that insanity was very rare in their native country. Most of them had never seen an instance. Cinquez stated, however, that he had seen one case.—*American Journal of Insanity.*

It was stated, a few years since, that mental alienation appears to occur more frequently in Great Britain than in any other country, except Norway—the proportion in England being one insane person to every 783 inhabitants; and in Scotland one in 573; whilst in Norway the ratio is one maniac in 551 of the population. Mania seems to increase as man recedes from the warm or southern countries bordering the Mediterranean, and approaches the colder regions of the north. In Italy the scale is said to descend so low as to give not more than one insane person to every 3,785 inhabitants.

MEDICAL GAZETTE.

FRIDAY, SEPT. 11, 1846.

While all persons living in a social state must submit to be governed by laws devised for the general good, it appears to us that professions should be allowed to construct their own rules for the regulation of the conduct of their members. No Act of Parliament can reach numerous offences which bring disgrace upon the whole body; and therefore special legislation on such a subject is, as we have already endeavoured to show, futile[*]. The Law assumes to itself, by ancient custom, the right to inquire into the conduct of its members, and to visit with the punishment of degradation, offences unknown to our judicial tribunals. This right is undisputed; and its exercise under a power of appeal, has had the effect of raising the character of the profession to a high standard. It might be a novelty in modern legislation to create such a power for the control of the medical profession; but all will admit that it is required, and we cannot perceive why a College, which originally granted a diploma to a delinquent member, should not be entrusted, under an appeal to a properly constituted Council of Health, with a power to recal it upon proof of gross unprofessional conduct. Is there any greater risk of abuse in the one case than in the other? We cannot adopt this opinion; and, what is more, we think that men who can be trusted with a power to place names upon their lists of members, may be equally entrusted to erase them, upon sufficient cause being shown. If they are competent for one duty, it appears to us that they must be equally competent for the other.

This may appear in the present state of the medical reform question, a Utopian scheme; but we really do not see why, because the plan has not hitherto been tried, it should not succeed. In the late medical reform measures, an attempt was for the first time made to remove what all have hitherto agreed in regarding as a stigma on the profession,—*i. e.* a want of power in its own body, to expel those who have been guilty of gross misconduct; and all we ask is, that when medical legislation becomes again a subject of discussion, it may be carried a little farther; for we think, in the remarks which we have already made on this subject, we have proved beyond dispute, that in respect to what may be termed *professional offences*, the law which it was proposed to enact, did not go far enough. Such a law would be inoperative in a great many instances, in which the powers it was intended to convey, should be undoubtedly brought into exercise.

We feel that we shall here be met by the question—What is intended by *unprofessional conduct?* We admit that there is a difficulty in laying down a definition; and we may ask, in reply, What is unclerical conduct? What is unprofessional conduct in a barrister? What is strictly meant in military law by conduct unbecoming an officer and a gentleman? We think it would be exceedingly difficult to give a strict definition in any one of these cases; but if the Church, the Law, and the Army, can punish its unworthy members, and preserve a proper discipline, without having before them a precise and technical definition of all the offences which come within the scope of their respective inquiries, we really do not see why the expurgation of the medical profession, is to depend upon the exact specification of the disqualifying offences.

In the first place, it is admitted that quackery exists *in* the profession as well as *out* of it: then, again, it is said quackery cannot be defined. Admitting the truth of these positions, the argument appears to amount to this,—As you cannot remove the names of all quacks from a legal register, you shall remove none,—a mode of reasoning which, on the face of it, is in the highest degree absurd. With regard to the class of *Syphilitic quacks*, let them practise, if it is to be so ordered by the wisdom of the Legislature; but let them not bring disgrace upon respectable men, by retaining a title of which they have shewn themselves to be unworthy. This is simply giving encouragement to their impositions on the public, and degrading those who conduct themselves honourably. We could point out some who now style themselves M.D., or M.R.C.S., who might, to the disgrace of the profession, claim to be registered as physicians or surgeons under a Medical Bill such as that brought forward by Sir James Graham; for, however undeserving they may be of the title, it would be impossible to bring "a copy or extract of" any "conviction or judgment for felony" against them. This, it will be remembered, was made an indispensable preliminary to expulsion or to the erasure of a name from the register.

---

[*] Pages 208 and 557 of last volume.

Next to these come the Morisonian or *Hygeist quacks*. Among them is one styling himself M.R.C.S.L., who is continually writing puffs on the Hygeian system,—on his cures of thousands of poor persons "who had been given up as incurable by the most eminent medical men," &c.; and who takes advantage of every striking event, from a murder to a shipwreck, to "hygeianize" the public with his advertisements! This is neither a felony nor even a misdemeanour, so far as we know: it certainly does not amount to a capital or transportable felony—the grand limit of professional delinquency, according to Sir James Graham's view of Medical Reform—but, in our judgment, it is a most gross *professional* offence, and constitutes a decided case for interference. Let such a person teach the "fallacies of the organic theory, &c.," and induce those of the public, "who are foolish enough to wish it," to swallow his pills by the gross: but we say, let him not, by retaining the title, palm himself off as the member of a College which ought to be respectable. This is just like giving legal currency to false coin. It has been, hitherto, one of the great defects of all medical reform measures, that they cannot reach such a man: he may defy them,—as he would be allowed by law to carry on his unprofessional practices without restraint; and admitting that he really possessed a diploma, he might claim to be registered as a "physician" or "surgeon."

Let us now turn to another sort of case, in which we have, on the advertiser's own shewing, a tripartite representative of the three classes of the profession; a professional Cerberus, — *tria juncta in uno*! We insert his advertisement, taken from the *Times* newspaper, omitting, of course, his name and address, as it is not our intention to forward his views. We have put a portion of it in *italics*.

"*To Families. —Private Medical Contract.* — A married medical man, who is a physician, a Member of the Royal College of Surgeons, and Licentiate of Apothecaries' Hall, of 20 years' practice in his present locality, who holds testimonials of high ability from the first physicians and surgeons in London, is desirous of attending families, by *annual contract*, on such reasonable terms as will enable persons of limited income and delicate families to command qualified medical aid at all times, and avoid having recourse to the dangerous and in the end expensive plan of taking patent medicines, or applying to ignorant druggists, from the fear of incurring a medical bill, and which in trying to avoid, they often lay the foundation of permanent disease or premature death. *The terms are one guinea and a half for one person, two guineas and a half for three persons, and half a guinea for each additional member of the family, including attendance and medicines.*"

Now we ask, Does not this advertisement speak for itself? Are we not to regard this as unprofessional conduct of the worst description? Can the dignity and respectability of the profession be maintained, so long as men like the advertiser, are allowed to belong to it? We are willing to allow that under no ingenious construction can it be brought within the meaning of the clause proposed by Sir James Graham. It is neither rape, murder, nor forgery; and yet it is a flagrant offence against the honour and respectability of the medical profession. Some may look upon such conduct as venial, because unfortunately it is too common; but we are disposed to regard it in the same light as it would be regarded by an Inn of Court, if the advertiser were a barrister.

In order to try it by this standard, we may give a legal character to this advertisement, adopting also the grammar of our professional brother!

To Clients. — Private Legal Contract.—A married barrister, admitted of Lincoln's Inn, who is Q. C. leader of his circuit, of 20 years' standing in his profession, and who holds testimonials of high ability from the Lord Chancellor and her Majesty's judges, is desirous of undertaking civil or criminal cases by contract on such reasonable terms, as will enable persons of limited income to command qualified legal aid at all times, and avoid having recourse to the hazardous and expensive plan of applying to ignorant attorneys from the fear of incurring a bill of costs, and which, in trying to avoid, they lay the foundation of a nonsuit or a conviction. The terms are one guinea and a half for one person, with a proportionate sum for each additional member of the family, including consultations, the drawing up of briefs, &c. Address to ——, Lincoln's Inn, when a card of address will be forwarded, or a consultation visit paid if required. N. B.—Felonies defended upon unusually low terms.

As the Honourable Society of Gray's Inn has lately expelled a barrister for the offence of acting as *his own attorney*, we will leave our readers to judge of the manner in which they would deal with a barrister, who disgraced his profession by advertising in this or any similar form. The delinquent would be beyond all question summarily and deservedly expelled. The Society would not require, what it would be impossible to obtain, proof of a conviction in a Court of Law (Sir James Graham's grand test of misconduct in the medical profession!) and there is not the least doubt that the judges would confirm their decision. As Lord Denman observed on a late occasion, rules necessary for the well-being of the body must be enforced without regard to the sufferings of any particular member. The medical *reform* measures have uniformly left all such cases untouched!

There are other instances of professional misconduct which also require notice. It is well known that many young physicians adopt the practice of hiring themselves out to druggists, and are paid by a per centage on the drugs prescribed.[*] There are, again, accoucheurs, having a legal title to practise, who have been known to disembowel their patients, mistaking the uterus or the large intestines for a fœtus, &c.! Cases of malapraxis like these, would fitly come under the jurisdiction of a Medical Board, whether the party were, in the latter case, *legally* convicted of manslaughter or not. Errors of judgment may occur to all, but the gross ignorance and incompetency displayed by acts of this kind cannot be thus leniently regarded. They neither admit of palliation nor excuse. With regard to the licensed *Mesmerists* and the *Homœopathists*, their practices are perhaps attended with less mischief to society, although some cases of recent occurrence, reported in this journal, are certainly adverse to this statement. The question really is, however,—"Are we entitled to allow men who practise such delusions on the public, to appear as *registered* practitioners, and thereby give them a kind of authority to exercise their arts upon the ignorant?"* We think not: they should not be allowed to have their names on any medical register; or, if by any accident they became inserted, they should be struck off on proof of the real character of the members being given before a competent professional tribunal. The question is really not so much one of *punishment* to them, as of *justice* to those who practise their profession in a fair and honourable manner. The hearty desire of the great body of English practitioners is, we verily believe, to clear the profession of all these quacks and impostors, whether they have a *legal* title to practise or not; and many of them will learn with sincere regret that the only reform proposed by the legislature was that of excluding, under all the difficulties of the strictest legal proof, those members who had been convicted of felony or of one of *two* misdemeanors!

---

[*] The terms of the following advertisement, taken from a late number of the Times journal, speak plainly enough of the object of the "physician of standing and *respectability*!"

"*To Chemists.*—A physician of standing and respectability wishes to rent Apartments in the house of a retail chemist, on terms which would prove mutually advantageous."

---

* One case came to our knowledge lately where a so-called homœopathic physician professed to cure amaurosis by doses of sugar of milk! Nothing else could be detected in the powders.

Reviews.

The Sanative Influence of Climate. By Sir JAMES CLARK, Bart. M.D. F.R.S. Physician-in-ordinary to the Queen. 4th edition, 8vo. pp. 412. London: Murray, and Churchill. 1846.

THE fact that this work has reached a fourth edition places it almost beyond the pale of criticism. It is, however, only fair to a deservedly successful medical author that the favourable reception of his work, as indicated by the appearance of successive editions, should be duly recorded in the pages of a medical journal.

Those of our readers who have had occasion to consult this volume, either for themselves, or to guide them in selecting a residence for their patients, must be so well aware of its merits, as to render it unnecessary for us to dilate upon them. We are acquainted with no work which contains so large an amount of accurate information on the sanative influence of climate. Having passed some time in the South of France and Italy, we can answer for the truthful descriptions of the localities, of which we were enabled to acquire some experience.

Invalids have been in the habit of trusting too much to change of climate, and medical men, it is to be feared, have often advised a journey to a distant land in cases in which there could not be the slightest hope of benefit; forgetting that

> *Cœlum non corpus mutant qui trans mare currunt.*

The following remarks in relation to the treatment of the consumptive, who are too apt to look upon change of climate as a specific means of cure, are of great practical interest. Although this practice of transporting phthisical patients is not now so common as it used to be, there are many who may profit by the author's suggestions.

"When consumption is fully established—that is, when there is extensive tuberculous disease in the lungs—little benefit is to be expected from change of climate; and a long journey will almost certainly increase the sufferings of the patient, and hurry on the fatal termination. Under such circumstances, therefore, the patient will act more judiciously by contenting himself with the

> most favourable residence which his own country affords, or even by preferring the comforts of home and the watchful care of friends. And this will be the more advisable when a disposition to sympathetic fever, to inflammation of the lungs, or to hæmoptysis, has been strongly manifested.
>
> "It is natural for relations to cling to that which seems to afford even a ray of hope; but did they know the discomforts, the fatigue, the exposure, and irritation, necessarily attendant on a long journey in the advanced stage of consumption, they would shrink from such a measure. The medical adviser, also, when he reflects upon the accidents which are likely to occur, should surely hesitate ere he condemns his patient to the additional evil of expatriation; and his motives for hesitation will be increased when he considers how often the unfortunate patient sinks under the disease before the place of destination is reached; or, at best, arrives there in a worse condition than when he left his own country, and doomed shortly to add another name to the long and melancholy list of his countrymen who have sought with pain and suffering, a distant country, only to find in it a grave. When the patient is a female, the objections to a journey apply with increased force. In these advanced cases the patient's sufferings may often be alleviated, and life prolonged, by confinement to apartments kept at a regulated temperature," (p. 51).

In respect to phthisis, Sir James truly remarks, that our attention should be chiefly directed not to a state of disease which is incurable by climate or any other means, but to the prevention and cure of the disordered state of health which constitutes the essential element of consumption.

The author has endeavoured throughout to show the fallacy of trusting too implicitly to a change of climate without proper attention being given to the malady under which the individual is labouring. In his introduction he observes:—

> "Here, as in every other department of the healing art, we must be guided by experience, and must rest satisfied with the amount of power which the remedy concedes to us. The charlatan may boast of a specific for many or for all diseases; the man of science knows that there exists scarcely a single remedy for any disease which can warrant such a boast; and that it is only by acting on and through the numerous and complicated functions of the living body, in various ways and by various means, and by carefully adapting our treatment to the circumstances of each individual case, that we can remove or check the disorders of the animal system, more especially those which have long existed. Let it not be imagined, that change of climate, however powerful as a remedy, can be considered as at all peculiar in its mode of action, or as justifying on the part either of the physician or the patient the neglect of those precautions which are requisite to ensure the proper action of other remedies. Had I not considered climate a remedial agent of great value, and deserving the utmost attention of medical men, the present work would not have been undertaken; but I feel that I should be at once compromising the dignity and honour of my profession, and acting in direct opposition to the dictates of experience, if I admitted for a moment that it is one possessing specific powers, or which may be indiscriminately employed, without regard to the general and fundamental principles of medical science," (p. 11).

Following out this doctrine, Sir James proceeds to give some account of those diseases which are benefited by a change of climate. This occupies about one hundred pages; and here, independently of the special object of these introductory remarks, the practitioner will find many useful hints on the treatment of disease, evidently derived from careful observation and matured experience.

Medical men devote too little attention to the prevention and removal of the causes of disease; although any material improvement in the health of a community must depend entirely upon this branch of medical science, which, under the name of hygiene, or medical police, has been too much neglected in this country. Under the head of "Ventilation and Unhealthy Residences," the author strongly insists upon the necessity of pure air being supplied to the respiratory organs during sleep. The bed-rooms of our houses, as they are commonly constructed, are but little fitted to supply this important desideratum; and, notwithstanding this obvious defect, it is the usual practice to adopt artificial means to render them even less salubrious than they are.

> "Their small size, and their lowness, render them very insalubrious; and the case is rendered worse by close windows and thick curtains and hangings, with which the beds are often so carefully surrounded as to prevent the possibility of the air being renewed. The consequence is, that we are breathing

air during the greater part of the
that is, during more than a third
our lives: and thus the period of
which is necessary for the renovation
mental and bodily vigour, becomes a
of disease. Sleep, under such cir-
ces, is very often disturbed, and
much less refreshing, than when
in a well-ventilated apartment; it
ppens, indeed, that such repose,
of being followed by renovated
and activity, is succeeded by a
of heaviness and languor which is
tinue till the person has been some
a purer air. Nor is this the only
ing from sleeping in ill-ventilated
nts. When it is known that the
dergoes most important changes in
lation through the lungs by means
ir which we breathe, and that these
nges can only be effected by the
on of pure air, it will be easily un-
how the healthy functions of the
ust be impeded by inhaling for many
re hours the vitiated air of our bed-
nd how the health must be effec-
stroyed by respiring impure air, as
g on unwholesome or innutritious
n the case of children and young
predisposed to consumption, it is of
re urgent consequence that they
breathe pure air by night as well as
by securing a continuous renewal of
their bed-rooms, nurseries, schools,
et a mother who has been made
by the sickly looks of her children,
pure air into their bed-room in the
before a door or window has been
and remark the state of the at-
e, the close, oppressive, and often
our of the room, and she may cease
r at the pale, sickly aspect of her
. Let her pay a similar visit some
er means have been taken, by the
ventilator or otherwise, to secure a
ly, and continual renewal, of the air
ed-rooms during the night, and she
ble to account for the more healthy
ce of her children, which is sure to
consequence of supplying them with
to breathe," p. 73.

chimney ventilator referred to
extract is that of Dr. Arnott.
e of the most simple that has
n constructed. It consists in a
opening into the chimney, near
f of the room. The plate which
the aperture is so accurately
d that while it allows a current
ted air to pass into the chimney,
s and effectually prevents the
of any smoke, supposing a
should set the reverse way.
eaking of *strumous dyspepsia*, a
disease so prevalent and fatal among children, the author attacks a mode of practice which has been of late years very fashionable, on the principle that all kinds of strumous disease depend on debility, and that tonics and a stimulating diet are indispensable to the treatment.

"Although it is not the object of this work to discuss the subject of medical treatment, I cannot resist the present occasion of entering my protest against the routine practice generally adopted in the strumous diseases of children. Active mercurial purgatives, an exciting diet of animal food, repeated, not unfrequently, several times a day, with the addition often of porter, or wine, or both, and this followed or accompanied by steel and other tonics, constitute generally, in this country, the treatment of scrofulous children. Such a mode of practice is at total variance with the gastro-duodenal irritation and hepatic congestion, which are present in greater or less degree in all cases of scrofula. The total want of success, also, which attends this stimulating treatment, and the marked and steady improvement produced by an opposite practice, afford a striking illustration of the nature of the disease, and the treatment founded upon it. The whole range of medical practice does not, I believe, afford a more striking example of the injurious effects of following a routine practice without regard to the nature of the disease. Because in a small proportion of cases of scrofula, in torpid, leuco-phlegmatic children, where an almost anæmic state exists, the preparations of iron and a stimulating diet prove beneficial, the same mode of treatment is indiscriminately applied to all! I have entered the more fully into this subject, because I know no greater or more common error in the treatment of strumous or delicate children, than that which has just been pointed out, and none which is fraught with more injurious consequences to the patient," p. 97.

The second part of the work includes the consideration of the climates of England and the south of Europe. This edition contains some remarks on Bournemouth, and a short notice on the climate of Egypt. Some additions have been made to the meteorological tables, which have been compiled with great care, and must have cost the author and those who assisted him, immense labour.

It may appear superfluous to recommend a work which must be in the hands of almost every practitioner; for where is the physician or surgeon who has not been repeatedly asked by anxious relatives and friends respecting the probable benefit to be derived in particular diseases from a change of climate? To those who require information on this subject, we may truly say, that we know of no other guide in the English language which can be so safely or profitably consulted.

Medical Trials and Inquests.

ACTION FOR DAMAGE TO VEGETATION BY MURIATIC ACID GAS.

Liverpool, Sept. 1st.

Gerard v. Muspratt.

A TRIAL of some importance in relation to Chemistry and Botany has recently taken place at the Liverpool Assizes.

An action was brought by Sir J. Gerard against Mr. Muspratt, a Chemical manufacturer, for damages for a nuisance alleged to have been caused to the plaintiff by certain chemical works belonging to the defendant.

The damage consisted in the alleged destruction of a large quantity of timber trees, to the value of £5825, by the muriatic acid gas evolved in the manufacture of carbonate of soda from sea salt. Several witnesses deposed that for the last five or six years, *i. e.* since the erection of the alkali works, the vapour had gradually led to the destruction of that portion of the timber on the estate which was exposed to it. Many thousands of the trees had become thus affected. The scientific evidence only will be of interest to our readers, and of this we subjoin the following abstract. The evidence in favour of the plaintiff was as follows:—

William Reynolds, M.D. Was a lecturer on chemistry, and had bestowed a great deal of attention to the study of chemistry. Was generally acquainted with the nature of the articles manufactured by Mr. Muspratt. There was undoubtedly a noxious vapour which arose from the manufacture of alkali, but when the apparatus was carefully constructed, the escape of vapour was, to some extent, prevented. The gas emitted was muriatic acid gas, which had a strong affinity to water or damp. On issuing from a chimney such as Mr. Muspratt's, it would have, in damp weather, the appearance of a thin white smoke. It would depend in a great measure upon the state of the atmosphere as to whether it would fall at a short distance, or be conveyed to a greater distance. In a dry atmosphere it would perhaps float a distance of four or five miles before falling near to the earth. The moisture given out in the manufacture of the material was undoubtedly noxious and injurious to vegetation. It had a strong pungent smell, and made the eyes smart. It likewise affected respiration a little. Its effects upon the leaves of trees would be, when weak, to turn them brown, and when strong, to curl them up and make them crimp. Leaves were certainly essential to the health of trees; without them, they would soon die. He had been over the plantations of Sir John Gerard's estate. There were a vast number of trees injured to a great extent. He could suggest no other cause for the injury they had sustained than the gas emitted from the manufactories of alkali in the neighbourhood.

Cross-examined by Mr. Serjeant Murphy.—The effects he had seen were only to be attributed to the noxious gas from the alkali works. It was not possible for him to assign any other cause. If the quantity of gas evolved from the chimney were only as 1 cubic foot to 10,000 cubic feet of air, he did not think it would have any effect upon vegetation at all (?). He could not say to what extent the gas would be diminished in its passage through a flue of 500 feet in length, and a chimney of 300 feet in height, having also to pass through a descending current of water. He did not know whether, after floating through the air for 2½ miles, its strength would be decreased or rendered innocuous; it depended, no doubt, to a great extent, upon the state of the atmosphere at the time. He thought grass was less susceptible of its influence than the leaves of trees, as the former was always growing. He should think it probable that if a strong volume of the gas was to pass over a field of grass its effects might be visible; but, of course, it depended in a great measure upon its strength, and the length of time it remained. Did not think that plants were quite so susceptible as trees, the latter being much higher. The flowers might be affected, and yet the plant not be injured.

By Mr. Martin.—Was aware that means had been tried to condense this gas, and prevent its escape altogether, but he believed that they were ineffectual as to the entire prevention. The body of gas was too powerful to be overcome by the water through which it was caused to pass in its passage up the chimney. As far as his experience went he had never known any means effectual in preventing the escape of muriatic gas.

John Lindley was professor of botany in the University College of London, and vice-secretary of the Horticultural Society; had devoted a considerable number of years to the study of botany. Had examined the timber on the estate of Sir John Gerard. Had found a great number of trees dead. Had examined the soil in places, and found it very good land. Had done so in places where there were trees actually dead and dying. Trees suffering from damp exhibited an entirely different appearance. Their leaves and bark were preyed upon by numbers of insects. He had examined several of the trees carefully, but they bore no evidence of having been injured in that manner. The injury at its outset was most apparent at the extremities of the upper branches. He had observed, in many instances, *that that side of a tree which was presented towards the alkali works was more injured than the opposite side.* The alkali works of Mr. Crossfield, as well as those of Mr. Muspratt, had been pointed out to him. He had also particularly noticed six Scotch fir trees, which from their age, must have been at one time very healthy; they were planted on a hill, in the form of a lozenge; the one *immediately fronting Mr. Muspratt's works* was quite dead, the two behind it were dying, and the other three, which had in some measure been *protected by them*, were comparatively uninjured. This had struck him as a remarkable case, and he had, therefore, particularly noticed them. The muriatic acid gas emitted from the manufacture of alkali was well known to be injurious to trees and vegetation generally. The trees he saw had undoubtedly been affected by it. He had no doubt the appearances he had witnessed amongst Sir John Gerard's woods were solely to be attributed to the noxious vapours in the atmosphere, and not to any natural causes. Wherever the trees had been *protected*, by being *in hollows or otherwise*, they were at present uninjured; but if the alkali works were continued to be carried on, he had no doubt all the trees on the estate would be eventually destroyed.

Cross-examined by Mr. Serjeant Murphy. —The stag-headed appearance of some of the trees, such as had been described, might sometimes be caused by defects at the roots. It was a common result in bad soils. Could not say whether apple-trees were very susceptible of injury from the effects of the vapour. Some trees were certainly less susceptible than others. He had noticed that oak and ash trees were affected soonest. If flowers were subjected to the vapour they would doubtlessly be destroyed, although the plant might not be injured. If the vapour that passed over a clover field in bloom was sufficiently strong it would no doubt destroy it. It was not possible to say what strength would be necessary, unless by actual experiment.

By Mr. Martin.—He had seen no appearance of bad soil on Sir John Gerard's estates that would cause the stag-headed appearance to trees which had been spoken of.

By the Judge.—Had seen no natural causes which could account for the injury done to the bark of many trees he had examined. Had particularly noticed a beech that was somewhat exposed towards Mr. Crossfield's chimney. On the *side which faced* it the bark was rendered quite hard and very difficult to be peeled off, while on the opposite side of the tree there was no apparent injury done. There might have been some very few instances of a tree being diseased, when the others around it were in a comparatively healthy state, but it generally happened that three or four trees near together were all alike affected.

In the defence it was urged that the damage to the trees was not due to muriatic acid gas, but to the dampness of the soil, and the burrowing of rabbits, which destroyed the roots. A horticulturist was called, who thought that the causes of decay were quite natural. Dr. Miller and Dr. Brett gave evidence in favour of the defendant.

Dr. Miller stated that he, with Dr. Brett and Sir Robert Kane, of Dublin, had made a series of experiments at the works. Muriatic acid gas is evolved in the process; part of it is condensed, and part escapes into the air. There is what is called a decomposing chamber, the gas from which passes into a tower filled with pieces of coke, and through which, from the top, a stream of water is constantly flowing. The gas is thus absorbed by the water. No gas escapes from the flue at the top of that tower. There are besides six reverberatory furnaces on the old plan. Connected with these was a long horizontal flue, communicating with the main chimney. A stream of water flowed through it, which would condense a great portion of the gas. Tested the air as it passed out of that flue into the main chimney at two different periods in the process. The muriatic acid gas, when in the greatest quantity, was in the proportion of 1 to 1,866 parts of atmospheric air; in the second experiment, 1 in 6,500 parts. The vapour has the greatest tendency to fall in moist weather. It would pass to a greater distance in dry. Thought the gas would be diluted 50 times in half a mile, and that it would not be appreciable at the distance of two miles.

In cross-examination he stated, that if the gas was sufficiently powerful, at the distance of two miles, to make the eyes smart, it was certainly appreciable.

In answer to some further questions by his Lordship, the witness said the gas was very pungent, and would be perceptible to the smell in extremely minute quantities.

White vapour might arise from steam; that, however, would be dispersed in a distance of 100 or 200 yards.

Dr. Brett gave evidence not differing materially from that of Dr. Miller.

His Lordship summed up, and the Jury, after deliberating a considerable time, returned a verdict for the plaintiff.—Damages, £1,000.

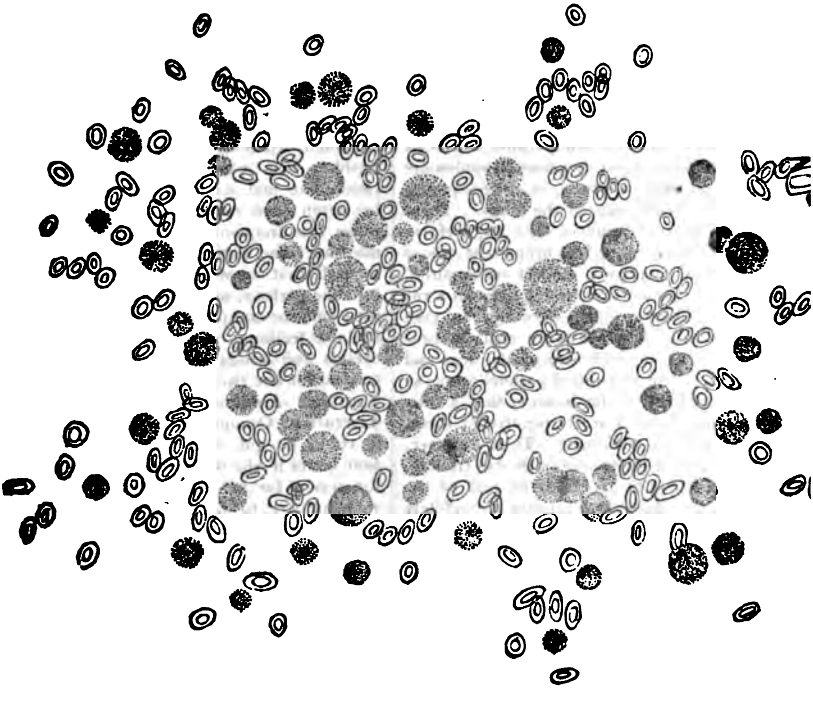
Remarks.—Admitting the general evidence for the plaintiff to be correct—that the extensive damage to the timber only became apparent after the establishment of the Chemical works at Newton, and that the trees were injured on the side to which the vapour would be carried by the prevalent winds—a fact so strongly born out by Professor Lindley's evidence—it is impossible to doubt, in spite of the negative scientific evidence, that the acid vapour was really the cause of the decay. The fact that *all* vegetation in and around the spot was not equally destroyed, does not appear to us to be material; for accident may lead to the acid vapour fixing itself by atmospheric currents more upon some spots than others, It is scarcely possible to determine the distance at which this gas would cease to be pernicious to vegetation,—because the constant and successive application of it to the leaves for months together, in variable hygrometric states of the atmosphere, would make up for its dilution. Dr. Christison and Dr. Turner, however, clearly proved many years ago that a tenth of a cubic inch diluted with 20,000 times its volume of air, so as to be quite *imperceptible to the nostrils*, shrivelled and killed all the leaves of various plants which were exposed to it for twenty-four hours—a fact of which Dr. Reynolds does not appear to have been aware; for he is reported to have said that double the proportion would be harmless to vegetation. This destruction of vegetable life is, perhaps, one of the most delicate tests for the presence of this gas. It is, however, a matter of regret, that so important and useful a manufacture, should be, in spite of all precautions, so destructive a nuisance to health and property.

Correspondence.

DR. FULLER'S CASE OF ENLARGEMENT OF THE SPLEEN.

Dr. Fuller presents his compliments to the editor of the Medical Gazette, and begs to inclose a drawing representing the condition of the blood in the case of enlarged spleen at p. 404 of last week's Gazette. The drawing was made at the time, and may serve to convey a better idea of the actual state of the blood than can possibly be obtained from mere verbal description.

45, Half Moon Street, Piccadilly,
Sept. 5, 1846.



"In addition to the natural blood-corpuscules, there were found to be a number of abnormal globules, of a spherical form, finely granular in appearance, colourless, and apparently possessed of no investing membrane, and no nuclei. These globules varied greatly in size; some were about the size of ordinary blood-corpuscules, but the greater number of them were much larger, some of the largest that I measured varying from $\frac{1}{1500}$ to $\frac{1}{3000}$ of an inch in diameter, the blood globules in their immediate vicinity having a diameter of $\frac{1}{4500}$ of an inch. They were so numerous as to constitute about one-fourth, or even a larger proportion, of the entire globules of the blood."—*Vide* page 406 of last week's Gazette.

DIAGNOSIS OF DISEASE OF THE HEART.

DR. R. C. GOLDING presents his compliments to the editor of the MEDICAL GAZETTE, and, in thanking him for the insertion of his letter of the 25th August (not June, as stated therein), begs to say, that in the twenty-seventh line, *for* "accompanying *the* sounds," "accompanying *both* sounds" ought to have been printed. Dr. Golding's initials *are* R. C. *not* R. G.

SEVERE HÆMORRHAGE FOLLOWING THE OPERATION OF TAPPING.

SIR,—When one proposes the operation of tapping in ascites, one is not accustomed to anticipate as a probable consequence of the operation, an alarming hæmorrhage. But an instance of it has occurred in my practice lately, which I deem it right to record for the benefit of the profession. On the 10th of this month I tapped Mrs. S , the widow of a tradesman in the city, labouring under ascites and anasarca, morbus cordis, and albuminuria, besides great dyspnœa, troublesome cough, and expectoration, as a consequence of the congested state of the lungs. These latter symptoms induced me to perform the operation, in hopes that my patient, whose appetite and digestion seemed unimpaired, might be enabled, first, to take rest in a recumbent posture—and, secondly, to take exercise, both of which were entirely prevented by the unwieldy size of the legs and abdomen. The abdominal parietes were so much thickened by the œdema, that a full-lengthened trocar scarcely penetrated them, and reached the abdomen. This, however, was effected, and after a good deal of trouble, from something obstructing the end of the canula, the fluid was pretty completely drawn off, and the canula being withdrawn, and the wound covered with adhesive plaster, the abdomen was tightly bandaged. Slight bleeding existed, but not such as to make me or my friend, Mr. Carlile, who assisted me, anxious, and we left our patient feeling much relieved. In the evening I visited her; and finding that an oozing had continued, to sufficient extent, to make her dress and the bandage uncomfortable, I took off the latter and the plaster, and observed that the hæmorrhage was continuing, but did not notice any thing like an *arterial jet*; and as the hæmorrhage had produced no influence on the patient's pulse or feelings, and did not seem to be now at all rapid, I contented myself with applying adhesive plaster and a thick compress on the wound, supporting them with towels firmly pinned around the abdomen; and directed my patient to get to bed and make herself happy, in the prospect of being able to sleep comfortably again. Next morning, the 11th, at 11 o'clock I visited her, and found her sitting up, blanched, with a quick fluttering pulse, eyelids and hands œdematous, and herself feeling very faint and anxious. Hæmorrhage had increased in the night with the heat of the bed to such an extent as to have soaked through blankets, bed, and everything, and to have brought on syncope. Her attendants had therefore removed her out of bed, and I found her sitting in a chair, looking deathly pale. On removing the towels I found underneath them large clots of blood; and they were thoroughly saturated themselves, and on uncovering the wound I found a somewhat rapid and distinctly arterial flow of blood from it. There was no time to be lost, and I thought the best thing to do was to plug the wound with a bit of sponge: this with the probe I was enabled to do, and it completely controlled the bleeding; which being effected, I advised her lying down, and being kept perfectly quiet, and ordered her to take some good strong ox-tail soup and wine; in fact, as much wholesome nourishment as she could. This was duly attended to. Between five and six hours after I called on her again: no recurrence of hæmorrhage; pulse less frequent and fuller than in the morning; the patient cheerful, and feeling so well that she walked from the bed-room into the parlour, much to my surprise, to see me: but she complained of a noise, and an irritable feeling; was still pale; and her eyelids and hands much swollen. I prescribed for her twenty minims of Compound Spirit of Ammonia and ten minims of Tincture of Opium, to be taken as soon as it could be got, and to be repeated every four hours if she were awake. She wished for oysters for her supper, and I thought it well for her to take nourishment in a way which she wished. After making a hearty supper of them and a sandwich she went to bed. She slept well, and was rejoiced at being able to lie down. Her daughter slept with her; and in the morning, finding her asleep, got up and left her in bed: she still slept on until between ten and eleven o'clock, when the people about her thought they saw a change in her appearance, and shortly after she died, without awaking.

As I have only recorded this case in relation to the operation and hæmorrhage, I shall not here detail the post-mortem examination, but shall simply state that the hæmorrhage had resulted from division of a very small branch of the deep epigastric artery, of a calibre not exceeding the size of a common pin, which ran in a slanting course inwards and across the linea alba for the epigastric trunk. There was no internal hæmorrhage. The walls of the abdomen were between two and three inches thick, and the impediment to the removal of the fluid had been occasioned by the falling into the canula of a *tail*, as it were, of the border of the omentum.

I am, sir,
Your obedient servant,
A. Burford Norman, F.R.C.S.

3, Duchess Street, Portland Place,
August 31st, 1846.

Medical Intelligence.

THE CHOLERA IN INDIA.

According to the latest intelligence from India, we learn that the cholera had lessened its ravages at Kurrachee, where it destroyed several thousand persons during ten days. The troops had lost about a fourth of their number. Only two officers had died.

ATTENDANCE AT LECTURES—MEDICAL AND LEGAL EDUCATION.

The Inns of Court have lately made a rule that every candidate for the bar shall, before admission, produce a certificate of having attended at least two courses of lectures on Jurisprudence. It is not necessary, however, that the candidate should undergo an examination. Our contemporary the *Times* has made some remarks upon the inefficiency of such a regulation. We subjoin an extract, because we think the criticism has a close application to some of our medical curricula, and to the present wholesale method of teaching by oral instruction. Students are required to produce certificates of having attended a fixed number of lectures upon subjects on which it is quite certain there will be no efficient (if any) examination by the licensing bodies. The *Times* adopts the hypothesis so far as regards the laws, that there will be attendance without attention:—the *reality* in physic is, that there is no attendance! The certificate it is well known can in many cases be most easily procured without it. We quite agree with our contemporary, that it is preposterous to compel a student to devote his time to subjects upon which he is not to undergo any examination:—

"Of what possible utility can it be to prescribe attendance at lectures, unless a subsequent examination of the student takes place for the purpose of ascertaining whether he has gained any knowledge of the profession he seeks to enter? The mere fact of listening to, or being present during the delivery of, a discourse does not necessarily presume that information has been acquired. It may happen that the words of the lecturer have, familiarly speaking, gone in at one ear and out at the other, or perhaps not have found even the most temporary admission to the head of the student. The production of a certificate of attendance at two courses of lectures may be easily achieved by any one who has been in the habit of taking a nap, making pen and ink sketches of the surrounding objects, or whiling away the hour of the lecturer's lucubration, in any other of the numerous ways that are in common use among students in general. Such as are not disposed to undertake the diligent study of the profession will not be attracted to it by compulsory attendance at lectures, which are to be followed by no examination, and will, therefore, be regarded by the idle as a most unnecessary bore, that must be endured, but which may be mitigated by allowing the mind to wander as far away as possible. * * * Two courses of lectures must be *attended*, but they need not be *attended to*: and though a candidate for the bar must have been corporeally present, he may have been as mentally absent as if he had never thought of the merest rudiments of legal education. It is not by such rules as those referred to that the bar will improve its position in public opinion, or have credit given to it for consisting of men who possess at least some qualification for the occupation they monopolise."

THE CREDIT SYSTEM IN MEDICAL SCHOOLS.

[We extract the following quotation from the last number of the British American Journal (August). The remarks apply to the Cis- as well as to the Transatlantic schools.]

"We are fully satisfied that an influence extremely detrimental to the profession, has grown out of the custom of granting credit in medical schools. The object in adopting this course is to secure a large class, perhaps for the purpose of out-numbering a rival school; and the consequence is, that all who present themselves, wholly irrespective of merit or qualifications, are duly enrolled as medical students, and their names go out to the world, swelling the catalogue of some highly flourishing school. The success of ils operates as an incentive to others ge in the study, seeing that it is so and many a one, who either has no on, or who may be too indolent to mechanical pursuit, forthwith doffs bler business, and unites in swelling ulapian throng. In this way the n becomes thronged with practi- of every grade;—and all parties, ose favoured with the gratuity, are ly injured. It is true, some meri- men will be found unable to pay; re can be no doubt, that the indis- e admission of pupils into medical is not only an act of injustice to o do pay, but also tends directly to the profession. We are gratified, e, to state, that the Transylvania School has determined, by formal n, to abolish *entirely* the credit and these resolutions will be adhered to. We hope all other will manifest a similar regard for the of the profession, and follow an so worthy of imitation."—*Western*

CS OF SCHOOLS OF MEDICINE IN THE UNITED STATES.

	Class 1845-6.	Number of Graduates.
ity of Pennsylvania	471	168
n Medical College, delphia	459	170
ity of the City of York	425	131
of Physicians and eons, New York .	200	38
Medical College, York	178	39
Medical College, York	115	42
d University, Bos- Mass.	159	31
ire Medical Institu- Mass.	142	35
n Medical College	140	36
edical College, New n, Conn. . . .	53	19
nd Medical College, ...	195	52
ghby Medical Col- Ohio	164	40
nt Medical College, dstock	—	24
edical College, Cin- ati	195	46
lvania Medical Col- Lexington, Ky. .	171	64
ille Medical Institute	345	43
sity of Maryland, imore	147	40
in Medical College, swick, Maine . .	73	19
Medical *College,* *go, Ill.*	*50*	*9*
Indiana Medical College, La Porte	81	18
Medical College of Louisiana, New Orleans . .	103	20
Medical College of Georgia, Augusta	112	15
Missouri University, St. Louis	92	29
Kemper College, St. Louis	—	11
Western Reserve College .	160	—
Pennsylvania Medical College	—	36
Philadelphia College of Pharmacy	—	16
College of Dental Surgery Baltimore	—	9
Total	4230	1200

British American Journal, Aug. 1846.

A SUBSTITUTE FOR A HERNIA KNIFE IN THE OPERATION FOR STRANGULATED HERNIA.

MR. GEORGE HOLMES, surgeon, has addressed the following case to the editors of the British American Journal:—In 1840, I was visiting one of the back townships, about 30 miles from home, when I heard that a poor old man, residing a short distance from the house where I was stopping, was suffering from obstinate constipation, and was considered by his neighbours to be in a dying state. I volunteered my services, which were thankfully accepted. On my arrival at his house I found the patient, who was 63 years of age, in great suffering; the bowels had not been relieved for five days, and he was then vomiting stercoraceous matter, pulse 130, and occasional hiccup. On examination, I found a tumor, about the size of a small hen's egg, in the groin,* in the situation generally occupied in femoral hernia; rather tender on pressure, but elastic, and increasing in size on the patient's coughing; the abdomen tense, and rather tender. He gave the following history of the case:—When about 30 years of age, he had had a violent attack of hooping-cough, and, after a severe paroxysm, felt a swelling rise suddenly in his groin. This soon disappeared, but returned again at intervals. He consulted a medical man in the United States, where he was residing at the time, who gave him a truss, which he wore for eight years constantly, when he left it off, as the tumor did not return, and, to all appearance, he was cured. Indeed, it did not again show itself until five days previous to my seeing him, after a lapse of 25 years.

I bled him, used the hot bath, and applied the taxis, but all in vain. The symp-

---

[* The author does not state in which groin the tumor was situated.—EDS.]

toms being so unfavourable, and the case appearing so manifestly urgent, that I determined to lose no time, but to operate. To my extreme mortification, I discovered that I had left my pocket-case at home. What was to be done? There was no medical aid within 20 miles, and to send to my own house in the bad state of the roads would occupy too much time; indeed, the delay would have been fatal. I had in my pocket a sharp, long-bladed penknife, and with this I determined to hazard an operation—having first made a director out of a piece of hard wood. I commenced by making an incision through the skin over the tumor, and then a transverse one at its base, forming an inverted T. Having dissected back the flaps, and divided the cellular and fascial covering, and exposed the hernial sac, I found, on opening it, a large fold or knuckle of intestine of a dark brown colour, and of a very glazy appearance. The sac contained very little serum. The next step was to insert my director under the stricture, which was very high up, and having guarded my penknife, by rolling some thread round it to make it resemble a hernia bistoury, passed it upon its wooden guide, and divided the stricture with very little difficulty, and returned the intestine. Very little blood was lost: the wound was closed, and the patient put to bed. About an hour afterwards I administered an enema, which thoroughly emptied the bowels; and having left the poor man an opiate, I consigned him to the care of an old midwife, hardly expecting a recovery. About a month afterwards I had the satisfaction to hear that he was quite convalescent; and I afterwards saw him—about two years after the operation—in very good health, and quite free from any hernial swelling at all.

I may here remark, that one very singular feature in this case is, that it was a crural or femoral hernia occurring in the male. Of this there can be no doubt, as the tumor began at the edge of Poupart's ligament, and then proceeded downwards between the crural vessels and the os pubis, and the abdominal ring; and the parts above the ligament could be distinctly felt perfectly uncovered by the hernia. This form is very rare in the male, although Lawrence, in his work on "Hernia," states his belief that it is not so uncommon as many authors consider it. It is the first instance that has ever come under my observation, either in private or public practice, although during a period of nine years I was constantly in attendance in some of the largest hospitals both in England and Ireland, where operations for hernia were of frequent occurrence. — *British American Journal, August, 1846.*

Selections from Journals.

SPECIAL PATHOLOGY.

OBSERVATIONS ON SYPHILIS, AS CONTRACTED FROM NURSED CHILDREN.

BY DR. C. EGAN.

Some interesting observations upon the above subject occur in a paper, read by Dr. Egan, before the Surgical Society of Ireland. After relating several cases in point, the author proceeds to make the following remarks:—

"That secondary symptoms are capable of communicating infection is an announcement which, doubtless, at first sight, will seem rather startling to one extensively engaged in testing the disease by innoculation; and although I must confess that after repeated trials I have never yet succeeded in producing the characteristic pustule which so often follows the introduction of matter from a primary ulcer, yet to deny the possibility of contamination by this means, after the proofs which are daily afforded to the contrary, would be sceptical in the extreme. Who that has carefully perused those cases, so clearly reported by the late Dr. Colles, whose accuracy of observation and acuteness in the discrimination of disease was a source of admiration to all, can question for a moment, that certain constitutional affections are capable of propagating a disorder which, when taken into the system, differs in none of its essential characters from the secondary effect as resulting from the ordinary venereal ulcer? The eruption, to whatever class or variety traceable, the peculiar appearance of the throat when attacked, the osteocopic pains, all demonstrate, with a degree of unerring certainty, its true origin. Is it not, then, a matter of surprise that on an authority so high as that of the celebrated Hunter, the disease should be pronounced as one so different in its nature, and so dissimilar in its properties, as to be entirely without the pale of those affections which he denominated venereal?"

Dr. Egan also protests very strongly against the opinions of a modern writer, who, although admitting the possibility of infection from the child to the nurse, describes the symptoms thus produced as sibbens. "There are, however," the author continues, "one or two points of minor importance to which I may briefly advert, as they have been particularly dwelt on by some, as constituting a marked difference between this and the more common varieties of the disease. It has been remarked, for example, that when enlargement of the axillary glands succeeds to an ulcer of the breast, produced from the mouth of an infected infant, suppuration, an event of so common an occurrence when the inguinal glands are engaged, never takes place; but how often are these latter class of absorbents attacked while conveying the virus from a chancre, situated either on the male or female organs of generation, and where no doubt can exist as to the nature of the ulcer, without such termination; and surely it will not be affirmed that the symptoms of infection are more equivocal because such a result has not followed. Again, it has been observed that the labia pudendi of the nurse are often the seat of raised tubercles, resembling condylomata, which are capable of communicating infection; and that these are not unfrequently visible where no form of eruption presents, and generally appear contemporaneously with disease of the throat. Now, although it must be admitted that mucous tubercles are of frequent occurrence in females labouring under utero-vaginal discharges, I am not aware of any instance in which the same species of disorder has been produced in the male from this source, and inoculation has as yet failed in furnishing me with any positive result. It would, however, appear that diseased nurses have, during sexual intercourse with their husbands, propagated an infection which, in external characters at least, is nearly allied to that form of raised ulcer of which the pudenda happened to be the seat at that particular time. How to account for this apparent anomaly, together with the simultaneous affection of the throat, I know not, but feel assured that the more we become acquainted with the precise characters of the disease, and the more frequent opportunities we may possess of studying the nature and comparing the symptoms of the disorder, as it presents in each individual case, in the same proportion will the difficulties which at present retard our progress be removed, and we shall be enabled with a greater degree of facility to elucidate these phenomena which for a while would seem inexplicable.

"It is a fact worthy of notice, and to which out of many cases I have not met with a single exception, that a nurse may continue to suckle a diseased infant, with perfect safety to herself, so long as no abrasion of the cuticle or ulceration in or about the nipple occurs; but when such takes place, she can no longer continue to do so with impunity. The same remark is made by Swediaur, who says:—'In all cases of the kind that have come to my knowledge, neither the nipples of the nurse were infected by syphilitic ulcers in the mouth of the child, or reciprocally the *nipples of the nurse being attacked* with ulcers, occasional ulcers of the same kind in the mouth, nose, and lips of the child, and thus communicated to it a general infection.' From this, then, it would appear that infection is not transmissible to the child through the medium of the nurse's milk. Mr. Parker, however, in the last edition of his excellent work on Syphilitic Diseases, enumerates this as one of the modes of contamination to the nurse" (child?) "but does not furnish any cases in support of that opinion."

Dr. Egan inserts a remark, made by Dr. Colles, to the accuracy of which he can safely vouch, it being verified by repeated observation: — "I have never seen or heard," Dr. Colles observed, "a single instance in which a syphilitic infant (although its mouth be ulcerated) suckled by its own mother, had produced ulceration of her breasts; whereas very few instances have occurred where a syphilitic infant had not infected a strange hired wet-nurse, and who had been previously in good health."

Although the infection produced in a healthy nurse by a syphilitic child, does not, in its introduction into the system, appear to be influenced by any governing power, yet it would seem that when once a class of symptoms present, others, if they show themselves at all, follow in a natural order. Thus, in one of Dr. Egan's cases a pustular eruption appeared, which was eventually followed by a form of sore throat peculiar to that particular class; and, in another case, a scaly eruption, which was succeeded by an excavated ulcer of the tonsil.

The disease when thus contracted appears to be less amenable to the ordinary modes of treatment, the constitution becoming, as it were, quickly saturated with the poison; and relapses after apparent cure very frequently occur. The preparation which the author finds most efficacious is the proto-iodide of mercury, pushed so far as to induce a mild degree of salivation. If, however, remedies are now laid aside, under the idea that a permanent cure has been effected, a few weeks will, in general, bring a recurrence of the same form of disease, or perhaps other symptoms, denoting a latent taint, will be superadded. Dr. Egan, therefore, finds it advantageous, before the effects of the mercury have completely worn off, to follow up the treatment by the administration of iodide of potassium, which ensures the patient the best chance of recovery. Under any form of treatment, however, relapses will occasionally take place.—*Dublin Quarterly Journ. of Med. Science.*

SYMPTOMATOLOGY.

At a meeting of the College of Physicians of Philadelphia, Dr. Morris read the following account of two cases of *hæmoptysis occurring in infants* of three months.

In January last I was called to render medical aid to the child of Mr. ——, aged three months. It was a male, one of twins, of large size, and fine health up to the time of its attack. The mother reported it to be labouring under an attack of colic, with diarrhœa of some days' standing. The discharges were frequent, green, and slimy. There was much heat of skin, and thirst. The abdomen was flaccid, and the face anxious. The child cried much, and the sound was plaintive. The usual prescriptions in such cases were made—warm poultices to the abdomen; small doses of calomel and castor-oil. By these means the condition of the child was improved, though the heat of skin and febrile disturbance still continued. About the third day of my attendance the mother shewed me her collar, which was smeared with blood, which she assured me had been discharged from the mouth of her infant. I at once ascribed it to some ulceration of her nipple, for which I searched carefully, but without being able to detect the slightest solution of continuity. The gums and throat of the child were next examined, and an ulcer was found near the isthmus faucium, to which, though small, the issue of blood was supposed to be owing. The following day she exhibited a handkerchief much stained with blood, of a pink hue, which had been discharged again by the child. Dr. Meigs was now requested to see the infant, and his suspicions were so strong that the blood was derived from the breast of the mother, and vomited by the child, that he could not be persuaded to the contrary till he had examined the nipple with a magnifier, and applied smart friction with a cambric handkerchief. The respiration of the child did not deviate from the natural state sufficiently to attract our attention[*], though we visited it often, and examined it carefully; nor was there at any time the slightest cough. After lingering a few days, the diarrhœa varying in degree, it sunk into coma, followed by convulsions and death. The autopsic examination, made by Dr. Sargent, was as follows:—Brain not examined. Larynx perfectly healthy. The mucous membrane of the trachea and bronchial tubes, as far as their fourth or fifth ramifications, was reddened, and, in the bronchial tubes, slightly thickened, but in both entirely free from false membrane, or viscid secretion of any kind. The inferior portion of both lungs soft and crepitant, but containing abundance of a colourless serous fluid. The lower lobe of the left lung was of a vivid red colour; contained a very small quantity of air, and but little serum; consistence of its tissue not materially diminished. The right lung was the same bright red colour in its middle and lower lobes; the consistence of both these lobes was diminished, particularly of the middle; and the greater portion of his lobe sank when placed in water of medium temperature. There was no appearance of pus, nor of lobular discoloration or induration. No adhesion between the opposed pleural surfaces of either side, nor any effusion of lymph or serum into either pleural cavity. Both lungs were expanded. No tubercles in the lungs, or in the bronchial tubes. The heart was of a healthy appearance; foramen ovale open. The abdominal viscera were all carefully examined, but no lesion of any kind was detected.

Within a week after, the surviving child was taken with symptoms precisely similar. Guided by the light derived from the examination of the preceding case, our attention was now turned to the chest. With great difficulty, owing to the extreme restlessness of the infant, we were enabled to detect dulness, upon percussion, of the posterior part of the lower lobe of the right lung, with slight mucous rattle. The quantity of blood discharged, though less than that in the preceding case, was considerable; and, in this instance, I saw it in the mouth of the child, frothy, and mixed with mucus. Small cups were applied to the back of the child, and two ounces of blood taken. Calomel in minute doses was given to act upon the diseased secretions of the liver; and in a day or two our patient was convalescent.

The only notice of this symptom I have met with is in the work of Rilliet and Barthez, who speak of their experience as confirmatory of that of Dr. Gerhard, who says he has never observed, in the pneumonia of infants, the bloody sputa attendant upon the disease when it occurs in the adult. They refer to the testimony of Valliex, who reports having met with a discharge of bloody mucus in the pneumonia of infants—a circumstance, however, of which they are evidently disposed to question the truth.—*Philadelphia Medical Examiner.*

OBITUARY.

On the 3d inst. at Newington Causeway, T. N. Moody, Esq. Surgeon, in his 33d year.

[* Heat of skin is mentioned to have been one of the symptoms in this case; it was very probably of that burning pungent character which Dr. Addison has shown to be so strongly indicative of the existence of pneumonia. This condition of the surface should always draw the practitioner's attention to the state of the lungs *even where no other outward indication of pneumonia is present.*—Ed. Gaz.]

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Aug. 29.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	693	Males....	460	Males....	493
Females .	696	Females .	429	Females .	475
	1389		889		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts,* 129. *Population,* in 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326) 117

NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303) 167

CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ... .(Pop. 374,759) 151

EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247) 208

SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469) 246

Total 889

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Summers; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	889	898	968
SPECIFIED CAUSES	888	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		201	188
Sporadic Diseases, viz.—	254		
2. Dropsy, Cancer, &c. of uncertain seat	95	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	157	155	157
4. Lungs, and other Organs of Respiration	188	227	294
5. Heart and Blood-vessels	22	23	27
6. Stomach, Liver, and other Organs of Digestion	101	87	72
7. Diseases of the Kidneys, &c...	10	6	7
8. Childbirth, Diseases of the Uterus, &c.	16	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c............	5	6	6
10. Skin, Cellular Tissue, &c.	1	1	2
11. Old Age	26	52	67
12. Violence, Privation, Cold, and Intemperance	13	26	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	2	Convulsions	42
Measles	6	Bronchitis	25
Scarlatina	19	Pneumonia	25
Hooping-cough ..	16	Phthisis	124
Diarrhœa	128	Dis. of Lungs, &c.	6
Cholera	13	Teething	8
Typhus	37	Dis. Stomach, &c.	8
Dropsy	14	Dis. of Liver, &c.	15
Sudden deaths ..	2	Childbirth	12
Hydrocephalus ..	43	Dis. of Uterus, &c.	3
Apoplexy	13		
Paralysis	21		

REMARKS.—The total number of deaths was 9 below the summer and 79 below the annual average. The deaths from diarrhœa among infants (105) are still numerous, but are decreasing in number. Other zymotic diseases, excepting typhus, are much *below the averages. In all the districts, the mortality was below the average.*

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Sept.* 3.—Robert William Carns, Bow, London.—William Lewis Dudley, Dudley. —George Todd, Ebenwood. —Robert Farrar, Leeds.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·93
" " Thermometer[a]............62·6
Self-registering do.[b] ......max.102· min. 38·5
" in the Thames water " 66·5 " 63·8

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·33: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 1° above that of the mean temperature of the month (61·6°). The extreme hebdomadal range in the self-registering thermometer was 63°5.

NOTICES TO CORRESPONDENTS.

Dr. Sharkey's communication on the Climate and Diseases of Jersey will appear in an early number. Dr. S. will be so good as to address any future papers, intended for the Editors, to the care of the publishers, Messrs. Longman and Co. 39, Paternoster Row.

Dr. Thomas Chambers's paper will have early insertion.

"Cupio scire" will find, we think, what he wishes in a Guide to the use of the Microscope, by Pritchard and Goring, published by Messrs. Whittaker and Co.

Lately published, 8vo. 3s. 6d. cloth,

CASES of DROPSICAL OVARIA Removed by the large Abdominal Section. By D. HENRY WALNE, F.R.C.S. Consulting Surgeon to the German Hospital in London.

"These cases are well chosen, the arrangements admirably made, the operation was well performed, and the after-treatment most judicious: we have, therefore, to praise the judgment, boldness, dexterity, and professional skill of Mr. Walne."—*Dublin Journ. of Med. Science.*

Longman, Brown, Green, and Longmans.

On the 1st of October will be published, 8vo. cloth lettered, the Annual Volume of

GUY'S HOSPITAL REPORTS: being Volume Four of the New Series.

*** These Reports will for the future be issued in Yearly volumes only.

S. Highly, 32, Fleet Street.

ROYAL EDINBURGH LUNATIC ASYLUM.—In consequence of the Resignation, on account of ill health, of Dr. Mackinnon, the Resident Physician and Superintendent of this institution, the Managers are desirous of receiving applications for the office from Gentlemen holding a Medical Degree or Diploma, and otherwise qualified.

Candidates must have had experience in the treatment of the Insane; but it is not indispensable that they should be married, the domestic arrangements being under the charge of a Matron. The Salary, &c., will be on a scale equal to that of other similar institutions. There are at present upwards of Four Hundred Patients in the Asylum.

Applications (accompanied by Testimonials, &c.) addressed to John Scott, W.S. Treasurer of the Royal Asylum, 7, North St. Andrew Street, Edinburgh, will be received till Saturday, 10th of October next, soon after which the Managers will proceed to fill up the Vacancy.

Edinburgh, Sept. 7, 1846.

ADVERTISEMENTS.

ALDERSGATE SCHOOL of MEDICINE, 58, Aldersgate Street.—The Winter Session will commence on Thursday, the 1st October, 1846, with an Introductory Address by Dr. Garrod, at 4 o'clock, P.M. A Conversazione will also be held at Mr. Smee's, 7, Finsbury Circus, at 8 o'clock the same evening; when the Prizes will be distributed to those Students who distinguished themselves during the last Session.

Anatomy and Physiology—Mr. Holthouse.
Practical Anatomy—Mr. Chance.
Medicine—Dr. Aldis and Dr. Grant.
Surgery—Mr. Smee.
Midwifery—Dr. Sewell.
Chemistry—Mr. Ronalds.
Materia Medica—Dr. Garrod.

SUMMER SESSION, 1847.

Botany—Dr. Arlidge.
Forensic Medicine—Dr. Snow.
Midwifery—Dr. Sewell.
Comparative Anatomy—Dr. Rayner, Mr. Pittard.

The Practice of the Lecturers at the several Public Institutions to which they are attached is open free to the Students; and some of the Lecturers receive Pupils to reside with them.

General Fee to all the Lectures and Hospital Practice required by the Royal College of Surgeons and the Society of Apothecaries, 55 Guineas; or to the Lectures singly, 30 Guineas.

Any further particulars may be obtained on application to the Secretary, at the School.

ST. BARTHOLOMEW'S HOSPITAL and MEDICAL COLLEGE.—The Winter Session will commence on Thursday, the 1st of October next, with an Introductory Address by Mr. Paget, at 7 o'clock, P.M.

LECTURES.

Medicine—G. Burrows, M.D.
Surgery—W. Lawrence, F.R.S.
Descriptive Anatomy—F. Skey, F.R.S.
Physiology and Morbid Anatomy—Mr. Paget.
Superintendence of Dissections—Mr. M'Whinnie and Mr. Holden.
Chemistry—Mr. Griffiths.
Materia Medica—G. L. Roupell, M.D. F.R.S.
Midwifery, &c.—E. Rigby, M.D. F.L.S.

SUMMER SESSION, 1847, commencing May 1.

Botany—F. J. Farre, M.D. F.L.S.
Forensic Medicine—W. Baly, M.D.
Midwifery, &c.—E. Rigby, M.D. F.L.S.
Comparative Anatomy—Mr. M'Whinnie.
Practical Chemistry and Natural Philosophy—Mr. Griffiths.

Hospital Practice.—The Hospital contains 630 Beds, and relief is afforded to 48,000 Patients annually. The in-patients are visited daily by the Physicians and Surgeons; and during the Summer Session four Clinical Lectures are delivered weekly; those on the medical cases by Dr. Roupell and Dr. G. Burrows; those on the surgical cases by Mr. Lawrence and Mr. Stanley. The Out-patients are also daily attended by the Assistant-Physicians and Assistant-Surgeons.

Collegiate Arrangements.—Warden, Mr. Paget. Students can reside within the Hospital-walls, subject to the rules of the collegiate system, established under the direction of the Treasurer and a Committee of the Governors of the Hospital. Some of the Teachers and other Gentlemen connected with the Hospital also receive Students to reside with them.

Scholarships, Prizes, &c.—At the end of the Winter Session the Annual Examination will be held for a scholarship, of the value of £45 a year, and tenable for three years. The examinations for the Wix, Bentley, and Collegiate Prizes, and those of all the classes for prizes and certificates of merit, will take place at the same time.

Further information may be obtained from *any of the medical* or surgical Officers or Lec*turers, or on application* at the Anatomical *Museum, or the Library* of the College.

BIRKENHEAD HOSPITAL and DISPENSARY.—Wanted, for the Birkenhead Hospital and Dispensary, a HOUSE-SURGEON and APOTHECARY, who will be required to devote his services exclusively to the duties of the office.

The Candidates must not be more than Thirty years of age, and unmarried; and they must also be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin. The Salary is £100 per annum, with Board and Lodging in the House.

Testimonials of character and qualification to be sent on or before Wednesday, the 16th of September instant (post paid), addressed to Mr. Thomas Fry, Birkenhead. The appointment will be made by the Committee, at the Commissioners' Rooms, Hamilton Square, on the Wednesday following, at 10 o'clock in the forenoon, when the Candidates will be expected to attend and be prepared to enter upon the duties.

MIDDLESEX HOSPITAL SCHOOL of MEDICINE.—The Session will commence on Thursday, October 1st, 1846, with an Introductory Lecture by Dr. G. E. Day, at 2 o'clock.

Surgery—J. M. Arnott, F.R.S., and Mr. Shaw, at 9 A.M.
Physiology—Erasmus Wilson, F.R.S. at 9 A.M.
Midwifery—Charles West, M.D., at 10 A.M.
Chemistry—Edmund Ronalds, Ph.D., at 10 A.M.
Medicine—Mervyn A. U. Crawford, M.D. at 11 A.M.
Materia Medica—Dr. G. E. Day, M.A. Cantab., at 11 A.M.
Hospital Practice—From 12 to half-past 2 P.M.
Anatomy—Mr. Campbell De Morgan and Mr. HENRY M. ROWDON, at half-past 2 P.M.
Pathology—Seth Thompson, M.D., at half-past 3 P.M.
Dental Surgery—Mr. Tomes, at half-past 3 P.M.
Application of Surgical Apparatus, &c.—Mr. E. F. Lonsdale, at half-past 3 P.M.
Practical Anatomy—Mr. Charles H. Moore, who will attend in the Dissecting Room for six hours daily.

SUMMER SESSION, 1847.

Forensic Medicine—Robert G. Latham, M.D.
Botany—Arthur Henfrey, F.L.S.
Diseases of Children—Charles West, M.D.
Application of Chemistry and the Microscope to Physiology and Pathology—Dr. G. E. Day.
Comparative Anatomy—

Prizes are publicly awarded at the termination of the Winter Session.

HOSPITAL PRACTICE.

The Hospital contains 250 Beds, and there were admitted during the past year 2322 In-patients and 10,415 Out-patients.

The Dressers are selected by the Surgeons from the Pupils without additional fee. The Senior-Dressers, in turns, board and reside in the Hospital free of expense. The House-Surgeon is elected half-yearly from the Senior Dressers, and boards and resides in the hospital free of expense.

Clinical instruction regularly given.

Physicians—Dr. Hawkins, Dr. Wilson, Dr. Crawford.
Physician-Accoucheur—
Assistant-Physician—Dr. Seth Thompson.
Surgeons—Mr. Arnott, Mr. Tuson, Mr. Shaw.
Assistant-Surgeon—Mr. De Morgan.
Opthalmic Surgery—Mr. Arnott.
Dental Surgery—Mr. Tomes.

Perpetual fee for all the Lectures, £50.

From perpetual pupils of the School, for the Hospital attendance required by the College of Surgeons and Apothecaries' Hall, £34 13s.

Prospectuses and further particulars may be obtained from the Apothecary and the Secretary, at the Hospital.

Lectures.

A COURSE OF LECTURES
ON
MEDICAL JURISPRUDENCE,

By Alfred S. Taylor, F.R.S.

Delivered at Guy's Hospital.

Lecture IX.

Exhumation of bones—Necessity for examining the jaws—Remarkable case of contested identity determined by the teeth. On the determination of the stature from the skeleton—Average stature—The measurement of one or two long bones will not suffice—Length of the principal bones in adult male and female skeletons—Differences in the skeleton according to race—Characters of the negro skull — Traces of fractures in bones—Case of identity involving the period required for the reproduction of bone—Marks of disease or deformity—Identity established by the presence of supernumerary bones — Deformities of the spine—Examination of bones which have been calcined—Identity established from an examination of the hair.

At the conclusion of the last lecture it was remarked that the observation of the state of the jaws and teeth may have a very important bearing in cases of disputed identity. The loss of particular teeth, the presence of supernumerary teeth, or the entire absence of teeth for a long period, may, if noticed by the medical inspector, lead to the removal of many difficulties in the identification of skeletons. A very curious instance of this kind occurred to me some years ago in a case which Mr. H. Reynolds and myself were called upon to investigate. It was a trial for murder under circumstances in which the body was never discovered, and in which, as it happened, an important question of identity arose, founded on the presence of the incisor teeth in a female of advanced age.

The case to which I allude is that of Elizabeth Ross, who was tried at the Old Bailey Sessions in December, 1831, for the murder of a female of the name of Caroline Walsh.

It appeared in evidence, that the deceased, Caroline Walsh, who was an old Irishwoman, had been repeatedly solicited by the prisoner to come and live with her and her husband, but the deceased refused. By much persuasion on the *part of the prisoner*, however, she at last consented, and went for that purpose to the prisoner's lodgings in Goodman's Fields on the evening of the 19th August, 1831, taking with her her bed and an old basket, in which she was accustomed to sell tape and other articles. From that evening all traces of the deceased were lost; and when the prisoner was required by her relatives to account for her disappearance she prevaricated, but finally asserted that she had gone out early in the morning of that day, and had not returned.

The testimony of the prisoner's son, who was the chief witness for the Crown, went to prove most clearly, that the deceased had been wilfully suffocated on the evening of her arrival by his mother (the prisoner) placing her hands over the mouth of the deceased, and pressing on her chest. He deposed that the following morning he saw the dead body in the cellar of the house, and on the evening of the same day he saw his mother leave the house with something large and heavy in a sack. This was at the time murders were being perpetrated in London to supply the Anatomical Schools with subjects for dissection.

Now it happened most singularly that on the evening of the 20th August, the day following the alleged murder, an old woman, of the description of the supposed deceased, was found lying in the street in the immediate neighbourhood, in a completely exhausted condition, and in a most filthy and squalid state. On being questioned she stated that her name was Caroline Welsh, and that she was a native of Ireland. Her hip was found to be fractured, in consequence of which she was conveyed to the London Hospital, where she subsequently died and was buried. The prisoner Ross, when apprehended, insisted that this was the female whom she was accused of having murdered. Hence, setting aside the direct contradiction given to this statement by the evidence of her son, it became highly important for the ends of justice that the identity or non-identity of the two women should be clearly established.

The extraordinary resemblance of names, and the exact coincidence of time, struck every one in court; but by the examination of about twenty witnesses, the following points of difference were elicited. It was stated that they were both Irishwomen, but Caroline Walsh came from Kilkenny; Caroline Welsh from Waterford. The former (the alleged murdered person) was eighty-four years of age; tall; of a sallow complexion; grey hair, and had (an extraordinary circumstance for her years) very perfect incisor teeth. The latter, Caroline Welsh (who died in the London Hospital) was about sixty years of age; tall of stature; dark like a mulatto, but had no front *teeth;* in addition to which it was deposed by a medical witness that the alveolar cavities corresponding to them *had been obliterated for a considerable time.* The witness brought the skull and jaw into Court,—for the body had been purposely exhumed for this examination;—but the judge would not allow it to be produced, and said he would be satisfied with the witness's statement respecting the condition of the jaws.

Other circumstantial points of difference were deposed to,—as, for example, Caroline Walsh was healthy, cleanly, and neat in her person, and her feet were perfectly sound. Caroline Welsh was considerably emaciated, in a dirty and filthy condition; her hip broken, her feet covered with bunions and excrescences, and one toe overlapped another.

The dress of the two women was somewhat similar. That of Caroline Walsh was most clearly proved to have been sold by the prisoner Ross to different persons; and almost every article was reproduced in Court, and sworn to by witnesses. The clothes of Caroline Welsh were proved to have been burnt by order of the parish authorities. Both of these women had similar baskets in their possession; that of Caroline Walsh had no lid or cover, while that found on Caroline Welsh had. Lastly, the body of the latter was taken up from the burial-ground of the London Hospital for the purpose of identification, and it was sworn by two of the grand-daughters of Caroline Walsh not to be the body of their grandmother.

This is perhaps one of the most singular cases of disputed identity that has come before a British Court of law. We have a coincidence of name, time, place, age, occupation, and circumstances, so extraordinary, that but for two circumstances it is probable the prisoner would have escaped on the presumption of a mistake, the body of the deceased never having been found, although all the dissecting-rooms in London were repeatedly searched for it. These circumstances were—1st, That the relatives of the deceased swore that the exhumed body was not that of the missing woman; and 2d, the medical proof of the entire obliteration of the alveolar cavities in the jaw of the exhumed body, proving that the incisor teeth must have been lost long before death, while several witnesses testified to the presence of these teeth, as a striking peculiarity in the missing female. Even had the features of the exhumed female been obliterated by putrefaction, the non-identity would have been established by this medical fact. The prisoner was convicted and executed.

Determination of stature.—The average *stature of Englishmen* is from five feet six to five feet nine inches; although about four out of one hundred are calculated to have a stature of from six feet to six feet three inches. In determining the stature from the measurement of the entire skeleton it is usual to add from an inch to an inch and a half for the thickness of the soft parts. When the bones are entirely disarticulated they must be laid out in their natural order, and an estimate made. Medical jurists have endeavoured to determine the stature of a skeleton from the measurement of one or more of the long bones,—as, for example, of the femur, tibia, fibula, humerus, radius, and ulna; but the rules for this mode of calculation are very unsatisfactory: and as M. Devergie has clearly shown from the tables, they are liable to lead to an error of five inches at the least. The fact is, there does not appear to be any uniform relation between the length of these individual bones, and the stature of a person. In tall persons it is observed that the bones of the lower extremities are proportionably longer than those of the upper; but we are liable to meet with all kinds of anomalies, and the best that can be said of this mode of measurement is, that it can never be proved wrong: for in general there can be no witness to speak to the stature of the person while living, in cases in which a medical investigation of this kind is directed to be made.

We advance very little to a solution of this question, even by deducing the average length of a long bone from the measurement of a large number of similar bones. The differences in the length of the bones will be very great according to whether the measurement be made from the edge of one articular surface to the other, or whether the processes be included or excluded, such as the styloid process of the ulna and the inner malleolus of the tibia.

I have here drawn up the measurements of three adult male skeletons, which were taken as accurately as possible by the repeated examination of the skeletons in our museum. Nos. 1 and 2 comprise nearly the average stature of Englishmen; No. 3 represents the skeleton of a tall man. The height here is the bare measurement of the bones with the soles of the feet resting on the ground: an addition of at least an inch should be made for the soft parts. The lengths of the tibia and fibula were taken between the articular surfaces. From end to end the fibula is a remarkably long bone. I have found it in adults to be in many cases as long as fifteen inches.

Adult male skeletons.

	No. 1.		No. 2.		No. 3.	
	Ft.	In.	Ft.	In.	Ft.	In.
Stature (sole on the ground) .	5	6	5	9	6	0

Transverse measurement from extremity of middle fingers	5	6½	5	10½	6	1
Femur . . .		17⅜		18		19½
Tibia { between }		15⅜		14¾		15½
Fibula { art. surf. }		13½		14		14½
Humerus . . .		12		12		13¼
Radius . . .		9		9¼		9⅜
Ulna		10		10⅜		10⅜
Clavicle . . .		5⅝		6		6
Hand from carpus, joining the radius . . .		7		7¼		6½

I will now call your attention to the measurements of two female skeletons; the one of an adult, the other of an aged woman.

Female skeletons.

	Adult female. Ft.	Adult female. In.		Aged female. Ft.	Aged female. In.
Stature . . .	5	2½	. .	5	
Transverse length	5	2½	. .	5	¾
Femur		16	. .		16
Tibia		12¾	. .		12½
Fibula		12½	. .		12¼
Humerus . . .		11⅛	. .		11¼
Radius		8	. .		7⅞
Ulna		9	. .		8¾
Clavicle . . .		5½	. .		5
Hand from the wrist . . .		6½	. .		6¼

These are the measurements of the bones of the arm of a well-formed soldier.

Arm of a soldier.

	Inches.
Humerus	12½
Radius	9¼
Ulna	10¼
Clavicle	6
Hand from wrist . . .	7⅜
Total length of arm . .	29½

29½ × 2 = 59

Clavicles 12

Sternum 1½

Stature about 6 feet.

The following are full-length measurements of perfect but detached bones of a male skeleton used for anatomical demonstration:—

Detached bones of a male skeleton.

	Inches.
Femur . .	18
Tibia . .	15¼
Fibula . .	15
Humerus . .	12¾
Ulna . . .	10¼
Radius . .	9¼

In the course of these investigations an attempt was made to determine whether there was any correspondence between the transverse length of *the skeleton measured* from the extreme ends of the phalanges of the middle fingers, the arms being maintained in a horizontal position. It will be seen that both in the male and female there is a very near approximation in these measurements. We have only the bones of the arm of a male adult; we may, by doubling its length, and adding twelve inches for the two clavicles, and an inch and a half for the sternum, determine approximatively the stature. Thus, by applying this rule to the arm of the soldier, of which the measurements have been just given, we should have a stature of six feet. This method of taking a whole extremity, although only approximate, is likely to lead to less error than that of determining the stature by the measurement of a solitary bone.

We have here two measurements, the one of a male skeleton between *ten and eleven years of age*, the other of a mature child at the end of *nine months'* utero-gestation. The dried cartilages at the ends of the long bones are not included in the measurement of the latter, because they are never found in graves; we have merely the osseons portions to examine.

	Male skeleton naturally articulated. Ft.	Male skeleton naturally articulated. In.		Mature child at 9 months. In.
Stature . .	3	10	. . .	19¾
Femur . .		11¾	. . .	3
Tibia . . .		9¾	. . .	2⅛
Fibula . .		9½	. . .	2½
Humerus . .		8½	. . .	2¼
Radius . .		6	. . .	2
Ulna . .		6¾	. . .	2¼
Clavicle . .		4	. . .	1⅝
Hand from wrist		5	. . .	2
Arms, each				8¼
Measurement across the chest .				3¼

Béclard remarks on the stature of the body, as determined by the dimensions of the skeleton, that it is about five feet four inches for an adult male, and about five feet for an adult female; but it is subject to great variation, not merely in the various races of men, but in individuals of the same nation. These extremes, however, are comprised within certain limits. Thus dwarfs (as adults) are rarely less than one-half of the average stature, while giants are seldom more than one-half above the average.

Determination of age from stature. — In attempting to determine the age of a skeleton from the measurement of the bones, it must be remembered that there is a great difference in the rapidity of growth, not merely in children of the same sex, but in children of different sexes. Sometimes a child will be much under the average stature before puberty, but will rapidly grow after having passed that period: hence the table before you, taken from M. Sue, is scarcely available for practical purposes. We must, at any rate, allow of the possible existence of very great deviations. Here is the table, somewhat modified by additional observations.

Age.	Stature.	
	Feet. Feet.	Inches.
At one year	2 to 2	3
" three years . . .	3	
" ten to twelve . .	4	
" fourteen to sixteen .	4 to 5	
" twenty to twenty-five	5 to 5	6

The full stature, however, according to some recent observations, is rarely attained until the age of from twenty-five to twenty-seven years. This table refers to the stature of living children; it will be a little less for the skeleton.

Difference of race.—There are certain differences in the skeleton, according to whether it belongs to an individual of the Caucasian, Mongolian, or Negro variety of mankind. The differences chiefly relate to the proportion which the skull bears to the face, and the relative lengths of the upper and lower extremities. In the Caucasian, the skull is rounded, the forehead raised, and the facial portion small in proportion to it. In the Mongolian, the upper and lower extremities are small, the cranium more of a square form, the forehead inclined, and the face large and flattened; the malar bones being especially prominent. In the Negro the proportions of the skeleton are smaller in the lumbar and pelvic regions; the upper extremities are long in proportion to the body, and the forearm and leg are large in proportion to the arm and thigh; the hands are small, the feet wide and flat, and the ossa calcis projecting much backwards. The skull is narrow and elongated, the forehead small and compressed, the malar bones and jaws projecting, and the teeth placed obliquely, so as to form a considerable angle at their point of union.

The most marked characteristics exist in the configuration of the skull; but the skull of Ho Loo, here before you, scarcely possesses the characters assigned to the Mongolian; it very closely resembles the skull of the Caucasian. That of the Negro may be more clearly identified. The skull of the Hindoo is a mixture of the Negro and Caucasian. It would be difficult, if not impossible, to pronounce an opinion of the race to which the skeleton belonged, from a few detached bones or parts of bones.

Identity from fractures.—With regard to other circumstances connected with the skeleton, it will be proper to observe whether the bones belong to the same or different individuals,—to the right or the left side of the body; and these questions may be determined in many cases by the mere inspection of fragments. The existence or non-existence of *fractures*, and the progress which may have been made towards ossific union, may also become an important subject of inquiry. In general the past existence of a fracture is most easily determined in an exhumed bone by the appearance of a knot or ridge, or in some cases a thick deposit of bone where union has taken place badly. In a fractured bone which has united in a curved form, it will be observed, on making a section, that the shell is considerably thicker on that side which has had to bear the greatest weight or pressure. All these facts, trivial as they may appear, may in reality be very material in a case of disputed identity; and unless carefully observed at the time, valuable evidence may be lost.

An English gentleman residing in India was charged with the murder of a native. The evidence against the prisoner was of a two-fold character: 1, that which preceded death, and 2, that which followed it. With regard to the first, it will be only necessary to refer to it briefly. There was great discrepancy in the statements of the witnesses, as to the manner in which the deceased was alleged to have been destroyed. It was shewn that the deceased had received a beating at the hands of the accused, but it was not proved that the man had died in consequence of the beating. There was no effusion of blood; there were no marks of violence of any kind upon the body before or after death, unless, indeed, we except a burning of the skin of the legs, which was alleged to have been produced by burnt paper or straw, but the evidence respecting this was anything but coherent and conclusive. Be that as it may, however, there was no evidence to prove that the alleged burning was the cause of the man's death.

Two of the men (natives) who said they carried the body to be buried at midnight, testified to the presence of marks of burning, but contradicted each other respecting the appearance of the legs; one swearing that they were covered with plaster, the other that the wounds and burns were not covered. The latter witness prevaricated, and, when asked how he knew that the legs were burnt, replied that he judged so from their being *white*.

The testimony respecting the degree and effects of the violence applied to the deceased during life being, then, so inconclusive, it was left to the jury to decide whether a quantity of human bones produced were those of the deceased, as was alleged by the witnesses, or whether they belonged to the skeleton of some other individual. According to the depositions, they were found in the following manner. Three months after the burial, one of the witnesses who had assisted in burying the deceased, after some search, discovered, as he supposed, the grave, on the verge of the bank of the river Damoodah. The body, it seems, had been buried pretty deeply in the sand, above the common water-mark, at the distance of sixty or eighty yards from the bed of the river, at a place which the waters had never reached, or could only reach on extraordinary occasions. The bones were uncovered, but not removed, until five days afterwards. It does not seem to have been clearly made out whether other bodies were ever interred in that spot or not, nor was the grave properly identified as that of the deceased.

The bones were subsequently examined by Mr. Cheek, a medical officer attached to the station of Bancoorah. He stated in his evidence that twelve of the vertebræ, six of the ribs, and the sacrum, were wanting; that the whole of the bones found were clean and dry, and free from periosteum, ligaments, and cartilage; that *one rib was broken*, and apparently had an osseous callus formed upon and around the fractured ends. The witness gave it as his opinion that the fracture must have occurred at least seven or eight days before death; he had never heard of an instance of exhumed bones being deprived of soft parts and ligaments by natural decomposition in three months. He should not expect the cartilages and ligaments to be separated from the bones within a year of the interment; he considered it, therefore, extremely improbable that these were the bones of the deceased, or of any person who had died within three months from the time of examination.

From this evidence, as the reporter of the case remarks, several considerations suggest themselves; as, for example, the identity of all the bones as those of one individual, the age of the individual, the nature of the bony excrescence or callus found on the broken rib, the time necessary for the formation of callus in order to settle the period at which the fracture took place, the period required for the total spontaneous destruction of the muscles, tendons, ligaments, and viscera; also the time required for the spontaneous separation of the sacrum from the ossa ilii in a man of the age of fifty or sixty. Many of these points, important as they were, were altogether passed over. The witness gave it as his opinion, that they were the bones of a *male* subject; but of this, he said, he could not be quite certain, as the sacrum was wanting. No opinion was asked or given as to the supposed *age* of the person to whom the bones *belonged*. Only one bone *was produced in court, viz.*, the *broken rib, with the deposit of callus at its extremity*. From the state of this callus there could be no doubt, supposing the bone to have belonged to the deceased, that the *fracture* must have been produced about eight or ten days before death; therefore some time previous to the violence employed by the prisoner.

The non-identity of the bones as those of the deceased, seems, however, to have been clearly established by the condition in which they were discovered. Even in a tropical climate the period that must elapse before the total destruction of the soft parts of the body in a grave, so that nothing but the bare bones shall remain, must be considerably greater than three months. In one instance, in which the body of an individual was exhumed four months after his death, the soft parts were still present.

Another curious feature in the evidence was the separation of the sacrum from the bones of the pelvis. The junction of these bones by ligaments and fibro-cartilage is perhaps one of the strongest in the body. In the young subject these bones are rather difficult of separation; but in the old, in whom anchylosis in general takes place to a greater or less extent, the difficulty of separating them becomes incomparably greater. It may readily be conceived, then, that the entire separation of this bone by decomposition would require, even in a hot climate, an extremely long period in a body interred in the ground—probably from three to ten years. Now, when we consider that the deceased had not been buried above three months, it is clear, both from the entire destruction of the soft parts, and the separation of the sacrum, that the bones discovered on the bank of the river could not have belonged to the deceased, but must have been part of the skeleton of an individual who had been buried in the spot many years before. There was here, therefore, a complete failure of identity, and the accused was discharged.

Identity from disease or deformity.—Questions of identity in relation to skeletons may be in some cases solved by reference to certain special characters of the bones. They may have about them indications of disease; as rachitis, mollities ossium, or syphilis. There may be, again, some personal peculiarities, such as the presence of supernumerary fingers or toes, which, if observed, may tend to throw some light upon the case.

A curious instance of this kind is mentioned by Orfila.

In the year 1823, a soldier, of the name of Bonino, who had been residing in a small village in the neighbourhood of Montpellier, suddenly disappeared. It was some time afterwards reported, that he had been murdered by a girl with whom he cohabited, and by a man of the name of Dimont, who was known to have been for some time her associate. It was only in 1826, after the lapse of more than two years, that the magistrates were first induced to direct an investigation of the case. A strict search was ordered, and the remains of the body, chiefly the bones, were found buried in the garden of Dimont, who had married the girl nine months after the disappearance of Bonino. It was of course essential to identify this skeleton as that of the deceased. It was well known that he had laboured under a singular personal deformity in having a sixth finger on the right hand, and a sixth toe on the left foot. The bones, which were nearly all perfect, were carefully removed and put together, when it was found that the phalanges belonging to the two smaller toes of the left foot were wanting; but the metatarsal bone of the fifth toe had a process externally, with a small articulating surface, which might have formed a supernumerary joint. Still, however, this was considered insufficient to establish the point, and the attention of the examiners was then directed to the right hand. The fifth bone of the metacarpus was shorter and broader than the one belonging to the opposite hand, while its digital extremity was divided into two parts, of which one formed a smooth, rounded, articulating surface in the axis of the bone; while the other, which presented a more flattened articular surface, formed with it an angle of about 8°. On attempting to articulate the first phalanx of the little finger, it fitted exactly the first articular surface, and presented on the outer side a distinct groove, the oblique direction of which coincided with the direction of this second surface. This left no doubt of the nature of the peculiarity of structure; although the phalanges of the sixth finger could not be discovered. The left hand and the right foot were complete in all their parts. Other corroborating circumstances transpired with respect to the marks of violence on the body, and the two prisoners were tried, condemned and executed.

Deformities of the spine or limbs are easily observed, and form well-marked points of identity. Briand mentions the following case. In 1825 the brother of a man named Michel Guérin suddenly disappeared. A year afterwards an excavation was made in the cellar of the house where the two brothers had resided, and some human bones were discovered. Among other circumstances, the medical men to whom the examination of these bones was referred, remarked that the body of the fifth lumbar vertebra was depressed and thin as it is met with in rachitic individuals, —that the pelvis was more contracted on the left than on the right side,—that the tibia and fibula of each leg presented a remarkable curvature, greater, however, on the left than on the right side, so that the left leg was half an inch shorter than the right. There were certain peculiarities about the teeth of the lower jaw,—the cuspidati forming a considerable projection in front of the incisors. These facts, together with other circumstances, established the identity of the bones, as being those of the individual who had been missing for a year.

It has been already stated that the bones which we are required to examine, may have undergone *calcination*. In several cases of murder which have occurred within the last ten years, an attempt has been made to dispose of the body by burning it. This is by no means unusual in cases of alleged child-murder. There will be no great difficulty in giving an opinion whether a bone has or not undergone calcination. Its character is entirely altered. Its shape may be preserved: but if burnt in an open fire, it will be white; if in a closed space, it will be black or ash-grey. The bone is brittle, easily pulverizable, and dissolves entirely in muriatic acid, leaving, if perfectly calcined, only some charcoal ash, but no animal matter.

In the exhumation of skeletons it is by no means unusual to find portions of *hair* on or about the cranium, or in the earth surrounding it. The hair should be separated by washing it first in water, and afterwards in a mixture of distilled water and diluted acetic acid. When dried on paper the colour will be observed, and this may be of some value in determining a question of identity. French medical jurists lay great stress upon the necessity for determining whether the hair have been artificially dyed or not. The common hair-dyes are compounds of lead, silver, or bismuth; and these metals, when the necessity arises, may be sought for and easily found by processes similar to those required for their detection as poisons when absorbed into the tissues. This will be a matter for future consideration.

We have now concluded the examination of the principal medico-legal facts connected with the dead body, and the various questions which arise in relation to sex, age, and stature, as bearing upon the *identity of the dead*. At our next meeting, I propose to take up the consideration of some medical facts connected with the PRESUMPTION of SURVIVORSHIP, and with AGE as it affects the *living*. We shall then pass to certain medico-legal questions connected with MINORITY, IDENTITY in the living, and LIFE INSURANCE.

Original Communications.

CASE OF
UNUNITED FRACTURE OF FORE-ARM.—EXCISION: CURE.

By George May, Esq. Reading.
Surgeon to the Berks County Hospital.

George Wicks, farm-labourer, æt. 30, healthy, and of good constitution, was bitten by a horse May 23, 1845, and sustained a compound fracture of the left ulna, two inches above its inferior extremity, with laceration of the skin and muscles; also a simple fracture of the radius a little above its centre. The arm was placed in a sling, with a splint on the palmar side, extending beyond the hand, and another on the outer side. He walked some distance to the residence of his surgeon as often as desired. At the expiration of nine weeks union had not occurred. The splints were reapplied, and continued nine weeks longer with the same result.

He was admitted into the Royal Berks Hospital, Sept. 27, 1845. At this time there was a small external wound, and considerable motion in both bones at the respective points of fracture.

The inferior end of the radius overlapped the superior, which latter could not be felt; the inferior end of the ulna was on the radial side of its superior fragment, neither bone being in linear apposition. The arm was much wasted, the action of the hand considerably impaired, and the fingers stiff and straitened. The middle and extreme phalanges of the fore-finger had been anchylosed by a former accident.

He was submitted to a course of treatment which included in succession friction, mercury, compression with rest, the hot douche, strong tincture of iodine externally, and a seton between the ends of each bone. No advantage having been gained by either of these means, and a strong leathern band having failed to assist him, the encumbrance was so great that he desired amputation, if no other means could be devised for his relief. With a due regard to the arguments, and respect for the high surgical authorities arrayed against the operation of excision, yet, considering the cause of non-union in this case to be entirely local, that the disabled condition of the hand had resulted from disuse and prolonged retention in the straight position, and not from paralysis, either sentient or motor, and entertaining a strong opinion that if the operation were properly performed it would prove successful, I objected to amputation without its previous trial, and a majority of my colleagues concurring in this opinion, the patient was transferred to my care.

In conducting the operation and treatment, the principal objects seemed to be,—1st, to remove the adventitious tissue, and such portion of the rounded end of each extremity of the bones, as to place a sufficiently broad surface in apposition with its fellow, with as little injury as possible to the periosteum and surrounding soft parts; 2d, to adjust the limb so as to preserve apposition, rest, and sufficient pressure during the needful period of reparation.

The first indication was materially assisted by the aid of a rotatory saw, obligingly supplied by Mr. Weiss, and the latter was fully accomplished by means of an apparatus constructed by our clever hospital mechanician, Mr. Dunn, and which was adjusted before the operation*.

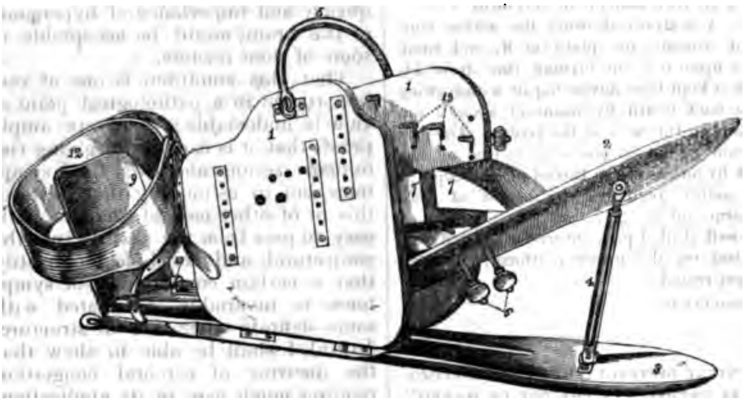
The operation, although unavoidably tedious, was not difficult; very little blood was lost, it was well sustained by the patient, and at its completion I felt assured of success, the bones having been smoothly and easily severed, and little injury having been done to the soft parts. He was kept in bed, the trunk being raised to enable the fore-arm to rest also in an elevated posture on the apparatus. The reparative actions proceeded favourably, with the exception of one small abscess, which presented on the inner side of the arm, opposite the upper wound. At the expiration of six weeks the wounds had healed, and consolidation having satisfactorily advanced, he left his bed, the apparatus being no longer required.

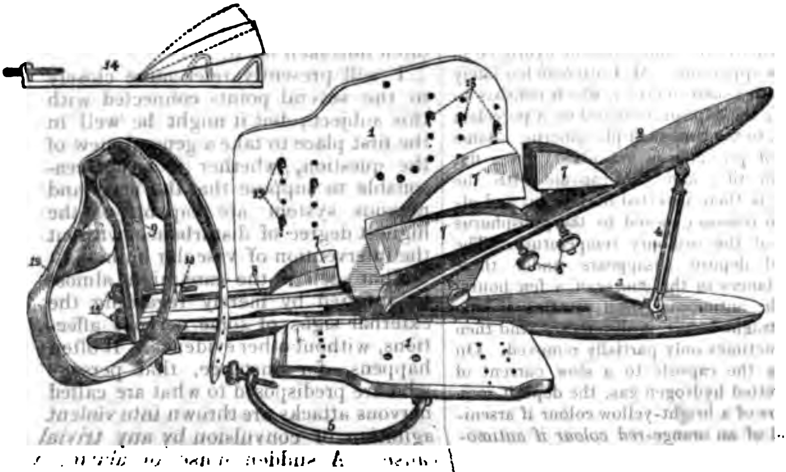
---

* The saw is said to have been first introduced into this country from France by Mr. B. Phillips. A sketch of the apparatus, by Mr. Bagg, is appended to this paper, and both may be procured of Messrs. Weiss.

The firmess of the union steadily progressed, and at the expiration of eighteen weeks he left the hospital, and is now occupied in turnip-hoeing, strong ossific union having resulted in both bones, and the actions and power of the hand and arm are daily returning—a more gratifying sequel than the alternative of dismemberment, with its possible consequences.

In recording the success of this operation, I do not assert its indiscriminate adaptation to all cases of ununited fracture; its position in relation to our surgical means I regard to be rightly indicated in an admirable article on Fractures, in the Cyclopædia of Surgery. In my comparatively humble position, it becomes me to speak with diffidence of what may be regarded by some perhaps as only an accidental success; I venture to suggest, however, that neither *rasping the ends of the bones*, nor *the removal of one fragment only*, will be sufficient; but that with the help of the improved instrumental means which modern ingenuity has supplied, the success of this case will not prove to be exceptional; and that when rightly indicated, and properly performed, the operation of excision, although severe, will yet be deemed legitimate, and no longer justify the censure of Sir Benjamin Brodie, "that no modern surgeon, having a moderate share of prudence, will undertake it."





Description of the apparatus.

1. 1. The side flaps.

2. The platform on which the hand should rest.

3. The lower platform, or body of the apparatus.

4. A nut by which the angle of the hand-board can be regulated to any degree which may be required.

5. A strong loop of iron to keep the sides of the flaps together.

6. Screws by which the wedges 7 7 7 may be regulated at pleasure.

8. A small platform, which can be adjusted by means of a movement shown in fig. 14.

9. A back splint, to which the upper arm is fastened by the bandage 12.

13. Screws passing through the brass plates in the flaps, by means of which pressure can be made on a small common splint placed on each side of the fore-arm.

14. A diagram showing the action concealed beneath the platform 8, and small wedge upon it 7, on turning the screw 11, which is kept from advancing or withdrawing in the back board by means of a small pin working in the neck of the screw. The iron skeleton wedge advances or retires on the screw by means of the thread in the loop 10. This action regulates the height of both platform and wedge 7.

A well-stuffed pad, covered with oiled silk, was laid on the upper platform, on which the arm rested.

September 1846.

ARSENICAL DISTINGUISHED FROM ANTIMONIAL DEPOSITS IN THE USE OF MARSH'S APPARATUS.

Various plans have been proposed to enable the experimentalist to distinguish easily arsenic from antimony, when a metal is deposited by the combustion of hydrogen in Marsh's apparatus. M. Cottereau has lately suggested a new method, which consists in exposing the deposit, obtained on a porcelain capsule, to the vapour of phosphorus. Some pieces of phosphorus are placed on a flat porcelain tile, and the capsule with the deposit is then inverted over them, and allowed to remain exposed to the phosphorus vapour at the ordinary temperature. The arsenical deposit disappears under these circumstances in the course of a few hours, while the antimonial stain remains as long as a fortnight before it disappears, and then it is sometimes only partially removed. On exposing the capsule to a slow current of sulphuretted hydrogen gas, the deposit soon reappears of a bright-yellow colour *if arsenical*, and of an *orange-red colour if antimonial.*

REMARKS ON
CEREBRAL CONGESTION.

By A. R. Rowland, M.D.
Lecturer on the Practice of Medicine at Charing Cross Hospital, &c.

There is no morbid state more frequently referred to as the cause of nervous affections, and particularly of those which are paroxysmal or marked by frequent accessions, than that of cerebral congestion. This term is, I believe, often employed without much consideration, although it involves a theory that might lead to erroneous practice. I venture to hope, therefore, that the following attempt to ascertain the relative frequency and importance of hyperæmia of the brain, might be acceptable to some of your readers.

That this condition is one of vast importance in a pathological point of view is undeniable; there are ample proofs that it is capable of giving rise to many serious and even fatal symptoms, but in estimating the effects of this or of other morbid changes, it is easy to pass from the positive into the conjectural, and conclude too hastily that a certain combination of symptoms is invariably associated with some definite alteration of structure. I think I shall be able to shew that the doctrine of cerebral congestion requires much care in its application, and that there is a power within the nervous system itself—a nervous action—which may imitate the symptoms of that morbid condition, and is often mistaken for it.

I will presently refer more closely to the several points connected with this subject; but it might be well in the first place to take a general view of the question, whether it is not reasonable to suppose that the brain and nervous system are capable of the highest degree of disturbance without the intervention of vascular fulness.

That such is the case might almost be inferred by merely regarding the external signs of some nervous affections, without other evidence. It often happens, for instance, that persons who are predisposed to what are called nervous attacks are thrown into violent agitation or convulsion by any trivial cause. A sudden noise or alarm, or course, only be taken to indicate the relative frequency of congestion at the period of death. To determine how far these transient disorders of the nervous system that terminate in health, such as headache, vertigo, &c. are dependent on this cause, will require rather a different mode of inquiry.

In analysing the nine cases where congestion was the only morbid appearance in the brain, it is impossible not to be struck with the variety and inequality of the symptoms in the different patients; indeed, nearly all the signs indicative of disturbance in the functions of the brain are to be found even in this limited number of cases, although it would be difficult to name one that could be trusted to as surely indicating congestion. In Andral, Vol. v. p. 226, there is an example of cerebral engorgement causing apoplexy in its most violent form, the patient suddenly dropping to the ground deprived of sense and voluntary motion. In the same volume, p. 235, there is a case of paralysis of the four extremities, in which both sides of the brain were found congested. Other cases began with vertigo, convulsion, screaming, numbness, headache, &c.; and it is obvious that the most trivial as well as the most fatal disorders of the nervous system might arise from cerebral congestion.

1. The first class of cases that I proposed to examine with reference to their origin are those where the patient is seized with numbness, prickling sensations in various parts of the body, flashes of light before the eyes, tinnitus aurium, violent headache or similar symptoms, which recur more or less frequently, but are of short duration. Many persons suffer in this manner for a series of years. The attacks may last for a few seconds only, or they may continue for several hours. When they pass off the patient may feel quite well, as if nothing had happened, or he may suffer some trifling inconvenience for a little while, which afterwards disappears.

[To be continued.]

ON

PASSIVE CONGESTION OF THE UTERUS.

By James Milman Coley, M.D.
Member of the Royal College of Physicians in London, Physician to the Western Dispensary, &c.

When a state of anæmia occurs during pregnancy, the veins and lymphatics of the uterus are liable after abortion or labours to remain in a state of atony, which renders them in some instances incapable of recovering their original diameter, unless sufficient rest is allowed in the horizontal position. Hence, those puerperal women who are compelled or induced to resume the upright position prematurely, while labouring under this state of cachexy, are apt to experience severe and lasting misery from pain in the back, and a sensation resembling that produced by prolapsus uteri, whenever they attempt to walk or remain long in the erect posture. On examination, we discover a soft, doughy, indolent, compressible tumor, occupying some part of the uterus towards its cervix. Pressure with the finger leaves an impression resembling that from œdema in the extremities, and little or no uneasiness is perceptible by the patient from the pressure. The shape of the tumor is oval, its long axis corresponding with that of the uterus, and its size varies. It may be distinguished from carcinoma by the absence of pain, tenderness, and induration, and by the healthy condition of the cervix and os uteri; and from the fibrous tumor of the uterus, by its characteristic softness. On examining the morbid part with the speculum, it appears injected with venous blood, which appearance I believe proceeds from the retardation to the return of the blood in the venous capillaries, and the consequent distension of the mucous membrane. Unless removed by proper remedies the disease may continue many years.

Treatment.—As long as the process of sanguification is interrupted, and the elements of the blood disturbed, the vessels circulating that fluid will be found to partake of the general enervation: the contractile power of the vessels, as well as other vital functons, being found defective. Hence, a constitutional remedy will be necessary, as well as the collateral assistance to be derived from a favourable position of the body: for it must be observed that the preternatural distension of the veins and absorbents, and the consequent infiltration of serum into the cellular membrane, are the result of a passive congestion, having but little disposition to terminate in inflammation. The essential treatment, therefore, consists in the exhibition of iodide of iron, which operates by removing the deficiency of fibrine and hæmatosine in the blood, and promoting the absorption of the lymph effused into the cellular membrane, the natural consequence of venous and lymphatic obstruction. Some practitioners recommend uninterrupted decembiture, with or without scarification of the cervix uteri. I have seen the horizontal position continually employed during many months without observing any improvement in the tumor; and I believe it will be found that no patient in a state of anæmia can bear such constant confinement without increasing the constitutional disorder. Having never found it necessary in the treatment of this disease to have recourse to scarifications, I cannot speak of their effect, although it appears to me they may be calculated to afford temporary relief, should the disease be found to extend to the cervix uteri.

Case I. Feb. 8th, 1836.—J. W., mother of seven children, consulted me two months after her delivery, complaining of prolapsus uteri and pain in the loins. On examination I found the posterior portion of the uterus thickened, œdematous, and descending from its natural position, so as to produce prolapsus, and to occasion the os uteri to be perceptible very near the os externum. The cervix was a little tender, and partook of the œdematous swelling, but the os uteri was free from disease. The patient was in a state of extreme anæmia. I prescribed occasional recourse to the horizontal position, and the use of a sponge-tent, which were persisted in during two months without any benefit. It now occurred to me that the disease proceeded from the vascular debility produced by the anæmia, and therefore I directed her to take iodide of iron twice a day. At *the end of twenty-one days the general health was* restored, and the vascular tumor entirely removed.

Case II. Feb. 14th, 1835.—A lady of a very delicate constitution and pale complexion, whose mother died from carcinoma in the breast, consulted me respecting a severe pain in the loins, and a prolapsus uteri, perceptible only when she was in the erect posture. These symptoms followed a miscarriage, which occurred six months before, and were first felt after she had imprudently left her bed the day following the abortion. Not having an opportunity of ascertaining the cause of these symptoms, I advised abstinence from active exercise, occasional decembiture, and the use of a sponge-pessary. This treatment afforded relief from time to time, but the symptoms continued to return whenever the patient sat up long, or walked a little distance. In the beginning of the year 1842, she commenced a trial of the horizontal position, which was continued without interruption till the middle of May. No obvious benefit resulted from this treatment. On the contrary, an evident decline of health was observable. On examination I now discovered a large, soft, doughy, inelastic tumor, occupying the anterior portion of the uterus near the cervix. The tumor felt ponderous, and had no resiliency. After explaining the innocuous nature of the disease, to the great comfort of the patient, I advised her to enjoy a ride daily in her open carriage, and the adoption of the medical treatment which had succeeded so well in the former case; and I directed her only to lie down when she felt the pain in the back. On the 2d of June I repeated my examination, when I found the swelling much diminished in thickness, and much lighter and resilient; absorption having proceeded in the most satisfactory manner. I therefore advised a continuance of the medicine and a temporary residence at the sea-coast. On her return from the sea-side, on the 10th of June, I again examined the tumor, which I found had nearly disappeared; the os and cervix still remaining unaffected. The shape of the diminished tumor was oblong, and it continued entirely free from tenderness. The medicine was now by my advice omitted, and on the 16th of September I found no swelling, except an obscure vestige of it resembling to the touch a small ligament. Her general health was much improved, and she could travel thirty miles in her carriage every day without pain, and could walk and stand a considerable time without perceiving any prolapsus. On the 19th of June in the present year, I again ascertained that no return of the tumor had occurred, and the patient continued able to ride in a carriage long distances without inconvenience; but she experienced pain in the back when she attempted to remain long in the erect posture, and she is still obliged to obtain relief by frequent recourse daily to the horizontal position.

47, Chester Square, London,
September 1st, 1846.

ON THE NATURAL PERIOD OF GESTATION.

Dr. Leray of Nantes, has drawn the following conclusions respecting the natural period of gestation, in a Memoir lately presented by him to a provincial Medical Society in France:—

1. The natural term of gestation, as well as of premature delivery, has a direct relation to the menstrual periods.

2. The return of these periods, throughout pregnancy, bears a direct relation to the day of the month corresponding to that at which the menses last appeared, whatever number of days there may be in the month.

3. The time at which delivery takes place in the majority of females, whether at the full period or prematurely, corresponds to the day of the month at which the menses ceased, or it occurs within the week following.

4. Nevertheless the parturient pains may in some rare cases commence in a normal way, at the end of the first two weeks of the tenth month.

5. Every delivery which takes place before the period referred to, may be regarded as premature.

6. Every delivery which takes place after one week from this period, may be considered as protracted.

7. The premature are in far smaller proportion than the protracted cases, and rarely precede the specified term more than five days.

8. The protracted cases, however, cannot be comprised within any specified limits.

9. In most instances the causes of premature or protracted deliveries may be assigned.

MEDICAL GAZETTE.

FRIDAY, SEPT. 18, 1846.

It is much to be regretted that, on a question which entirely involves the security of an adult population from the attacks of small-pox, there should exist among men who have professedly bestowed great attention upon the subject, so wide a difference of opinion respecting the necessity for revaccination. There are two views respecting the alleged necessity for resorting to this practice: on the one hand, it is regarded merely as a test of the efficacy of a former vaccination: on the other, it is considered indispensable to the safety of the individual, owing, as it is alleged, to the protective influence of the vaccine virus ceasing at or about the age of puberty. In the essays upon Vaccination and Small-pox sent to the Parisian Academy of Sciences, the writers generally admitted both of these views, but strongly maintained the latter, endeavouring, as we have elsewhere remarked,* to support it by various statistical details, some of which, however, prove nothing, while others tend to confirm what is now a generally received truth, namely, that a large number of adults are either unvaccinated, or they have been but imperfectly vaccinated. Hence, then, in the adult populations of most European countries, many persons may be found who are not only susceptible of the vaccine virus, but in whom it will produce its usual effects in a degree more or less marked.

According to the French reporters, revaccinations have succeeded more frequently among adolescents and adults than at other periods of life:

---

* Vol. xxxvii. pp. 36, 291.

hence, without taking into consideration how imperfectly vaccination may have been originally performed in these subjects, they have, as we think, somewhat hastily assumed that the virus has a tendency to lose its protective power at a certain period of life.

The following statements are adduced in the French Report as proofs of the efficacy of revaccination. The small-pox appeared in the College of Soreze, and attacked forty of the pupils, of whom two only had not been vaccinated. The remainder were revaccinated to the number of three hundred, and the epidemic suddenly ceased. In 1831 the small-pox broke out in the Foundling Hospital at Mantua. Twelve children were attacked; the remainder, to the number of one hundred and two, were revaccinated, and the disease was arrested. This last case has the disadvantage of proving too much, since the inference to be drawn from it is, that not even children *under the age of puberty* are protected, and that revaccination, if necessary at all, must therefore be resorted to for persons of all ages on the occurrence of epidemic small-pox. But the most remarkable part of the statement yet remains. We are distinctly told, that both at Soreze and in Mantua the revaccinated were *equally protected, whether the second vaccination succeeded or not!* Again, in the epidemic of Marseilles, it is alleged that Dr. Robert performed twenty-four revaccinations, of which only *two* were successful, but *all* the individuals were protected! From these results it appears to us to be obvious, that the protection of the individuals cannot be due to the efficacy of the *second* vaccination, rendered necessary by the alleged deterioration of the original virus; for in this case what could have protected the twenty-two individuals in whom the second operation did not succeed? To us the facts appear to shew indisputably, that revaccination was not necessary on these occasions; and instead of their furnishing any proof that the virus had worn out its powers, the results actually establish the contrary, and shew that where the second operation did succeed, vaccination had not been properly performed in the first instance.

So far the argument adopted by the reporters appears to be that which is properly denominated the "*argumentum a rebus non existentibus*:" but we now come to some vague statements in which it is alleged that revaccinations have strikingly tended to check the progress of epidemic small-pox. Thus we are informed that the revaccinations adopted in the armies of Prussia and Wurtemberg, since 1833, have led to the almost entire extirpation of the small-pox, so that among 44,248 revaccinations there were only during a period of five years *four* cases of small-pox; while in the five preceding years, there were 1056 cases among the vaccinated. To us, however, it appears there is some difficulty in admitting that the results were due to the cause assigned; and we think the facts will admit of a more simple explanation. The data furnished by the reporters show that while in St. Petersburgh the revaccinations were successful in only 3 per cent. of the cases, they reached 10 per cent. in France with the new, and 20 per cent. with the old virus,—50 per cent. in Prussia; and in Wurtemberg,—a country where the greatest attention is stated to have been paid to the subject, the successful revaccinations amounted to 29, 50, and 70 per cent. in different provinces, while in the army they were 34 per cent. How is it possible to reconcile such discrepancies as these, except by supposing either that where the per centage of success was greatest, the original vaccinations had entirely failed, or that the rules for determining the relative success of the second operation were widely different in different localities. It appears to us that these very discordant results fail to make out the necessity for the revaccination of adults, a practice so strongly recommended by the reporters. In many instances the successful vaccinations amounted to no more than we might expect to meet with in a mixed population; and certainly we do not see how the preservation of the Wurtemberg army can be ascribed to *re*vaccination, when it is stated to have succeeded only in the proportion of little more than 30 per cent.! Instead of resorting to such an unsatisfactory explanation, it appears to us more reasonable to ascribe the immunity of the soldiers to the proper vaccination of those who had not already undergone the operation, or in whom ineffective lymph had been used. The reporters trusted entirely to the appearance of the *cicatrices* as the evidence of a former successful vaccination; but this, it is well known, is by no means a conclusive or satisfactory proof.

One important fact adverted to by the committee seems to have been entirely forgotten by the reporters. While the small-pox protects against the cow-pox, and the latter against the former, the cow-pox offers no certain protection against itself; therefore local and general symptoms analogous to those of vaccination may be occasionally reproduced in the same individual:[*] hence the apparent success of a second vaccination is no criterion of security; and if the first vaccination have been properly performed, we do not see the least reason to believe that the individual is placed in a state of greater security by submitting to be revaccinated. A case is elsewhere reported[*], in which, after what is termed revaccination, the individual was seized with small-pox in a very severe form; and we believe that, under equal circumstances, the disease would be just as likely to attack those who had, as well as those who had not, undergone revaccination[*].

Much stress has been laid upon the Wurtemburg observations, but Dr. Stark has to our minds satisfactorily exposed the fallacy of trusting to them. Dr. Heim's statistics show that if revaccination is necessary for the vaccinated, it is equally necessary for those who have had *small pox*; and as it is not professed that vaccination gives greater immunity against the disease than the disease gives against itself, the operation is on this ground wholly unnecessary. According to Dr. Heim's statistics, individuals may be vaccinated in the very same proportions *after small-pox* as after *vaccination*; and as a proof of this Dr. Stark has drawn up the following table[‡]. Of 100 vaccinated after small-pox, 32 succeeded, 26 were modified, 42 failed.[§] Of 100 vaccinated a second time 34 succeeded, 25 were modified, and 41 failed. It is, then, clear from these data, that if the occurrence of what is called a successful revaccination, is to be taken as a criterion of the failure in power of the vaccine virus, it also indicates a failure in protective power of small-pox itself; and if, on these grounds, we are to adopt revaccination, it is equally necessary, after the same space of time, to inoculate persons for small-pox, in order that they may not again take it in a natural way! This appears to us to be so completely the *reductio ad absurdum* that it requires no further comment.

---

[*] A correspondent who has addressed us on this subject, considers that the symptoms produced by revaccination are those of constitutional irritation from the absorption of an animal poison; and that their whole course is anormal, and entirely distinct from those of true vaccination. The local effects are also entirely different. The paper contains some interesting facts derived from actual observation. See vol. *xxxvi. page* 1064. The effects are sometimes *serious. See case* reported at p. 515 of the *present number.*

[*] Vol xxxvi. page 1065.

[†] Dr. George Gregory properly observes in regard to revaccination, that two imperfect processes do not constitute a perfect one, and therefore even from a successful revaccination future immunity cannot be decisively pronounced.

[‡] Inquiry into the Probable Cause of the Continued Prevalence and Fatality of Small-Pox, by James Stark, M.D. Edinburgh, 1843.

[§] These results are also given in the report of the Committee, and it is added, that at Kasan, in Russia, in 1837, 1436 individuals who had had small-pox, and bore evident cicatrices of that disease, were vaccinated. The operation perfectly succeeded in 271, in a modified form in 84, and entirely failed in 1081. This is equal, in 100 variolous persons, to 19 successful cases, 6 modified, and 75 failures. The vaccine lymph taken from these variolous vaccinated patients was used successfully to vaccinate others; and, according to Dr. Heim, with greater effect than attends the use of the ordinary virus.

While there is not a single fact adduced by the advocates of revaccination which does not admit of a different explanation, we think it is obvious that they have furnished some very strong arguments against their own conclusions. They trust to the appearance of cicatrices, and admit their fallacy; they trust to the production of local and general symptoms from a second insertion of vaccine virus, and at the same time admit that whether the second operation succeeds or not (!) there is *equal* protection; they allege that revaccination after puberty has stopped epidemics, while they adduce proofs that revaccinations among children under puberty, were equally required for the arrest of epidemics; they declare that a second vaccination is necessary to guard against an attack of small-pox in the vaccinated, and adduce proofs that it is equally necessary to revaccinate those who have already had the disease in a natural way! In short, the only satisfactory conclusion we can draw from the French report is, that revaccination may be occasionally useful as a test of the efficacy of a former vaccination; and that during the prevalence of epidemics, where in large sections of people there is any doubt on the subject, it might be *advisable to resort to* a general vaccination. We altogether disbelieve in the necessity for adopting this practice on the theory that the vaccine virus gradually loses its protective power by age. If this theory be true, it yet remains to be established by some clear and indisputable facts which admit of no other reasonable explanation.

A CASE which we have elsewhere* printed furnishes a remarkable illustration of the revolting consequences which must necessarily attend the burial of the dead in the overcrowded vaults of churches, and in the graveyards of the metropolis. The facts which have here come to light by mere accident, show that after a few years the remains of the metropolitan dead are liable to be carted away like rubbish by dust-contractors, and the coffin furniture to pass into the hands of marine-store dealers! The sentimental opponents of the Interment in Towns Bill contend that the law should not interfere with that sacred feeling of which this mode of interring the dead in the midst of the living, is supposed to be an indication; but it is clear that if in the necessary construction of new sewers, vaults should happen to sink, coffins may become displaced, "intolerable effluvia" may escape, and a parochial vestry may, in spite of this supposed sacred feeling, issue an order to a "common dust-contractor" to clear away coffins and corpses indiscriminately! One gentleman coolly enters into the statistics of the question, and thinks it a good answer to state that "such an immense mass of broken coffins could not have come from *their* vaults." If his statistics be correct, it is a clear proof that these acts of desecration are much more widely spread than is commonly supposed, and that some delinquents have even now escaped. The evidence clearly shews that sewers cannot be constructed in a large city without the risk of leading to this indecent exposure of the remains of the dead,—a fact which, moreover, adds to the necessity for speedily abolishing this mode of interment. We give an abstract of this case, because it is our intention shortly to show that the maintenance of the practice is indecent, unhealthy, and inconsistent with the carrying out of those sanitary measures which it is proposed by the legislature to bring forward in the next session of Parliament.

---

* Page 508.

STATE OF MEDICAL ETHICS IN FRANCE.

THE following case is reported in the *Gazette Médicale* to have occurred recently at Bethune in France. A medical man newly arrived in a neighbourhood where there was already a highly-esteemed practitioner in good practice, commenced his career by endeavouring to injure the reputation of this gentleman, resorting to the basest calumnies in order to attain his object. Finding that his efforts to bring M. Bacqueville, the practitioner referred to, into disrepute, had completely failed, he at length spread a report that a lady of high rank had been clandestinely delivered by this gentleman, and that the child had been made away with! When this report was fairly in circulation, the calumniator proceeded to a cemetery, disinterred a child, and threw it into a privy on the premises of M. Bacqueville; he then addressed a letter to the authorities, accusing M. Bacqueville of having murdered a child, and pointed out the place where the body would be found. Accordingly the premises of M. Bacqueville were searched, the body of a child discovered, and that gentleman was taken to prison, where he remained confined for a considerable time. He was at length liberated on account of there being no evidence against him. From some cause or other, shortly after this, the scandalous proceeding was discovered, and public indignation being roused, the man was brought before the authorities, and charged with an offence *contra bonos mores*, in disinterring a body. He was found guilty, and sentenced to a year's imprisonment, and a fine of 3000 francs (£120).—

Reviews.

Life at the Water Cure: or a Month at Malvern. A Diary. By RICHARD J. LANE, A.R.A. &c. 8vo. pp. 336, with Illustrations. London: Longman and Co. 1846.

THIS is a work on the fashionable quackery of the day, in which the author, evidently an enthusiast, and at one time an hypochondriac, seeks to inoculate others with a desire to try what he calls the water-*cure*. It is not long since that we published an account of Priessnitz and his system, drawn up by one of his own countrymen; one who, from knowing something of the mysteries of physic, was not likely to be imposed upon by allowing the curative effects depending upon one part of the treatment, to be ascribed to another[*]. As Mr. Lane has thoroughly satisfied himself that a change of residence to Malvern from a smoky metropolis, diversion of mind, regular meals and habits, and wholesome diet, —including "splendid mutton," "perfect bread," and "undeniable butter," had little or nothing to do with his recovery from an overworked state of mind and a worn-out condition of body, we shall abandon any attempt to try and convince him. When a man has adopted the absurd doctrine of Sir E. B. Lytton that—

THE WET SHEET IS THE TRUE LIFE PRESERVER,

there is an end to all reasoning with him. Man was born for the "wet sheet;" he is in substance an hydropathic animal, and without being daily packed, sitzed, and douched, he knows not one half of the pleasure of existence! Mr. Lane's motto is, *salus in aquis*. The late Sir Francis Burdett, and more recently Mr. Dresser[†], tried the plan, and, if we mistake not, found it to be *mors in aquis;* and probably the same casualty would have happened to the author of this work, but for the "splendid mutton," mountain exercise, and other accessories which, in our opinion, served as antidotes to the hydropathic discipline that he daily underwent.

---

[*] Page 72.

[†] See vol. xxxvii. page 1055.

"blind faith," as the author r describes it, in which he the patient of the famous Dr. may be inferred from the fol- extract :—

> ok a brisk walk with the doctor inner, who, in reply to my ques- d me that he had treated nearly a patients successfully at Malvern ! o him of my limping gait, and the lity of straightening the right leg train (or something like it) in the peradded to the general weakness. ed how it was caused, and he con- y saying, '*In a week you won't d you have a knee.*" (p. 23).

exposition of the Doctor's might have been taken in ys, but Mr. Lane evidently in the most favourable light; the *salus in aquis* principle. athy not only strengthens the t it strengthens the eyes *:—

> ed how it was that my eyes did not was always the case when I walked reakfast, without first eating a r a crust. He told me that water ns the eyes, and that I should not feel that weakness again ; that s *(!)* should be first promoted, ligestive organs kept at rest at least after rising." (p. 23).

can wonder after this that the dressed for dinner in a happy r that he perseveringly followed, e was so easily persuaded to efficacious. The first entry of every day is, "packed, bathed, t as usual" (early),—for early nd fresh air are essential parts Malvern treatment; although the curative effects to them is, uthor's view, only one of those eyed objections" to hydropathy proceed from the interested with which medical men al- iew any innovation on their s and practice (p. 299). Even reface, Mr. Lane does not hesi- place Priessnitz on a level with , and to compare the opposition ydropathic doctrines, with that it one time existed to the admission of the discovery of the circulation of the blood! "The discovery (of hydropathy) is yet recent, and it meets with the common fate of new revelations; *i. e.* the hostility of the doctors."

Even blindness gives way to the Douche.

> "The Doctor told me of a curious instance of the recovery of sight. A magistrate from Wales who had suffered from a severe illness which ended in gradual loss of sight, became quite blind. In two months, when his health had been quite restored, returning from the Douche, he sat upon the bench opposite the Belle Vue hotel, and found that he could read the inscription on the hotel which was shining with fresh gilding, the first step towards the restoration of sight." p. 224.

It is satisfactory to know that Dr. Wilson is not always successful. While our author was there, a death occurred at the Establishment. It appears that a patient would force himself upon the Doctor *nolens volens*. It is quite clear to us, that had the doctor had the option, he would not have received the patient, for the great secret of success among hydropathists is to select their patients; but even this melancholy result is made to redound to his skill. The patient died on the tenth day, the very day, as the author believes, *predicted* by the Doctor on his arrival! p. 93. The balance of *cures*, however, is so enormous as completely to throw into shade any apparent failure of the system. In a walk with the Doctor the author

> "had become greedy to hear his details of cures, but he tells me, in a pamphlet published by Baillière of Regent Street, he has given seventy interesting cases authenticated by the patients. He said that some of the best cures he had made are kept secret by the patients to avoid being worried by their friends, opposed to the system, and incredulous of its effects. (How this does disgust me!) The wife of Captain B. of Jersey, had a tumor in the breast as large as a middle sized apple, and as hard. It was feared to be cancerous, and after much treatment continued increasing in size and became daily more painful. After six weeks here the lady was restored to perfect health, and the tumor more than half diminished. In three months very little remained, and by two subsequent letters I find that the tumor has entirely disappeared : there are no remains of it!"

We do not feel that we should be justified in occupying our space by entering further into an analysis of this work. Mr. Lane is evidently an enthusiast of no common order. He tells us he has experienced and witnessed enough of Hydropathy, to justify his "belief that it is the greatest blessing that Providence ever revealed for the preservation or the restoration of health!" p. 336. His feelings against the "faculty," except the renegade hydropathic section of it, is such that nothing which they can say on the subject is ever likely to shake his belief; nor does it appear to us necessary that medical writers should make the attempt to refute seriously conclusions evidently based on a mistake. We do not doubt that Mr. Lane was restored to health under Dr. Wilson's management; but our opinion is, the Malvern air, "splendid mutton"—exercise, regular diet, and a prescribed regimen, with a "blind faith" in the prescriber—had considerably more to do with his cure, than the packing, bathing, &c. Indeed, our opinion is, that with only the ablutions necessary to health, he would have recovered as easily, as speedily, and as perfectly, as if he had undergone neither douche nor sitz. The work is illustrated by numerous well-executed engravings representing not only all the steps of the hydropathic process, but all kinds of droll incidents and events which the author in his exuberant spirits appears to have encountered.

---

* Wilson is evidently a facetious practi- d knew his man. After his return lvern, the author could not withstand ation of eating "Nesselrode pudding," according to him, gave rise to an attack za! He wrote to Dr. Wilson for advice. r, after recommending the wet sheet ing within doors, ends by reminding pondent that "*influenza is not to be* (p. 350).

A Guide to the Buxton Waters. By W. H. ROBERTSON, M.D. 3d Edit. Pamphlet, pp. 31. London: Bogue. 1846.

THIS little pamphlet is intended as a guide to those who are disposed to seek the renovation of health by the use of the Buxton waters. It is a popular abridgment of another work by the same writer; and the fact that it has reached a third edition, is a sufficient proof that it has met with the approbation of the public.

There is, according to Dr. Robertson, a curious and inexplicable fact connected with the waters of Buxton, namely, that whether taken internally, or applied externally, they have a very great stimulating power: and yet their chemical composition fails to account for this property. They contain only *fifteen grains* of saline matter to the gallon; and the salts consist of the chlorides of magnesium and sodium, and sulphate and carbonate of lime. The soft water of the Thames used in London contains *twenty-seven grains* of saline matter to the gallon, and the salts are of the same kind. The gaseous contents of the Buxton spring, we are informed, are carbonic acid and nitrogen, in the proportion of a cubic inch and a half of the former, and of four cubic inches and a half of the latter, to the gallon. The temperature is 82°. The effects of these waters on persons in health, or labouring under certain diseases, are very serious if frequently taken or used; and a striking instance of this is related by the author. The stimulating effects can hardly be ascribed to the two gases mentioned; and yet common water, heated to 82°, would have no such influence on the body. It would appear probable that this is due to the presence of some volatile principle; for we are told that at a higher temperature than 95°, "the bath seems to lose its peculiar properties, and to become little more influential than a bath of ordinary hot water."

The use of these waters is found to be injurious in cases of organic disease of the brain, heart, lungs, liver, or kidneys, as well as in diseases of a congestive or inflammatory tendency. When properly used, they stimulate the appetite, and act specially on the kidneys and bladder. In some instances they act as a strong purgative. The author recommends their employment in cases of general debility, chronic rheumatism in all its forms, and gout.

We have derived much satisfaction from the perusal of this little pamphlet, which will be found a necessary companion to all who are inclined to pay a visit to the Buxton springs.

Observations on the Edinburgh Pharmacopœia, and on the Dispensatories of Dr. Christison and Dr. A. T. Thomson, &c. By RICHARD PHILLIPS, F.R.S. 8vo. pp. 56. London: Highley. 1846.

OF all kinds of criticism that which is the least profitable and the least interesting both to the public and profession, is the "*tu quoque*" style. We can apply no other epithet to the scientific slaughtering, which these "Observations" prove to have been going on among these combatants, who have earned for themselves a good reputation in science. It appears that a Pharmaceutical internecine war has been secretly waging for some time past between the editors of the English and Scotch Pharmacopœias; and we much doubt whether the pamphlet before us will be the last indicative of these literary attacks.

Seriously speaking, we cannot approve of the captious spirit in which these "Observations" are written. Mr. Phillips takes upon himself the responsibility of translating the London Pharmacopœia from Anglo-latin into English. Drs. Thomson and Christison point out some inaccuracies, and Mr. Phillips's answer consists in a violent attack upon the works published by these authors,—in which he endeavours to convict them of bad grammar, bad arithmetic, bad botany, bad chemistry, and bad pharmacy Allowing that in some cases mistakes of importance have been made by both of the Dispensatory-writers, this would not prove the critic or his pharmacopœia to be immaculate, and we think it is the duty of a scientific man to resist the provocation of replying in a caustic and hypercritical spirit. A large allowance must be made for the authors of works on chemistry and pharmacy:—the great variety of subjects treated, and the complex calculations required, are quite sufficient to explain the fact, that there is not a single work, published on these sciences, from which a hard-hearted critic might not extract errors sufficient to make up a pamphlet of "Observations" such as these. The profession and the public would, however, look closely to the practical tendency of the so-called errors. Mr. Phillips has devoted such indomitable industry to the task, that we doubt whether he can have left a single error in the works of the two authors unnoticed and unexposed: but many of these corrections are based upon mere technicalities of no importance to science or to medical practice, and we draw the inference that none can have been left behind. from the very trivial nature of many which have been so prominently brought forward.

Among the enormous atrocities in natural history of which Dr. Christison is accused are the following. Aloes in the Edinburgh Dispensatory stands thus:—

> "'*Aloe Indica.*' What is meant here? (*rogat Phillips.*) Aloes produced in India. If so, none is found in English commerce. Does it mean Aloes brought from some part of the world by way of India? If so, '*Aloe Socotrina*' is '*Aloe Indica.*'" p. 8.

Ethnographers are in the habit of speaking of *American Indians*. What can they mean? Americans who have been bred in India? We know of no positive rules by which such names are fixed; and we do not see that the Edinburgh College are obliged to take the nomenclature of the English College, as the absolute standard of correctness.

In the next observation we have a piece of botanical criticism:—

> "'*Glycirrhizæ radix.*' The substance meant is a *rhizoma*, not a *root*!" p. 8.

At p. 28 Dr. A. T. Thomson is convicted of the capital error of stating that crystallized citric acid contains 1½ equivalent of water; whereas, according to Mr. Phillips, it should be 1⅓. Assuming Mr. Phillips to be quite correct, Dr. Thomson is guilty of assigning one-sixth of an equivalent too much!

At p. 34 the Doctor is accused of putting C for Cyanogen, instead of Cy; and of spelling Magendie with a *j*: thus, Majendie! In the same page, in reference to *Acidum Nitricum Purum*, Dr. Christison is censured for stating that the Edinburgh Pharmacopœia only, annexes the condition of testing for the absence of that common impurity, muriatic acid, from the nitre employed. This statement, observes Mr. Phillips, is incorrect as regards the London College, for, under the head of *Notes*:—"it will be seen to be directed that from a solution of nitrate of potash, neither chloride of barium nor nitrate of silver precipitates any thing"! This of course is very explicit and clear to those pharmaceutical practitioners who know what *things* chloride of barium and nitrate of silver are likely to precipitate under all conceivable circumstances! But the chemistry is as bad as the grammar. If a little carbonate or tartrate of potash were mixed with the nitre, *something* would be precipitated, although no muriatic acid was present. So imperfect a description may be very well characterized as no method of testing at all; and any one desirous of knowing whether his nitre did or did not contain any chloride, would certainly not have his difficulty removed by following Mr. Phillips's instructions.

The remarks on Liquor Arsenicalis at p. 12, and on Corrosive Sublimate at p. 22, are conceived in an equally captious spirit with those to which we have already referred.

> "'*Corrosivus Sublimatus.*' The tests of the Edinburgh College for ascertaining the purity of this preparation are: 'it sublimes entirely by heat, and its powder is entirely and easily soluble in sulphuric ether:' but as we are informed by the same College with respect to camphor, that 'its powder evaporates entirely when *gently (!)* heated,' and as Dr. Christison states, that sulphuric ether is a good solvent of camphor—allow us to inquire wherein these substances differ?" p. 22.

We do not find that Dr. Christison has any where forbidden the pharmaceutist, while applying chemical tests, to employ his eyes and nose as adjuncts. A man who cannot by sight or smell distinguish camphor without applying heat, or trying to dissolve it in ether, had better not dabble in drugs, or dip into any dispensatory for information. The merest tyro at a druggist's, supposing that he has lost the sense of smell, knows that camphor will melt and burn when heated; and most apprentices are far enough advanced in pharmacy, to know that corrosive sublimate possesses neither of these properties: yet setting aside appearance and smell, because camphor has two properties in common with corrosive sublimate, Mr. Phillips seriously propounds the question—"Allow us to inquire wherein these substances differ?"

In another page there is the following piece of criticism:—

> "On referring to the Benzoic acid in the Edinburgh Pharmacopœia, we find 'Tests'—*Edin.* 'Colourless, sublimed entirely by heat;' and with respect to arsenious acid we meet with 'Tests'—*Edin.* 'Entirely sublimed by heat.' Now as arsenious acid is usually as colourless as benzoic acid, it is evident that, according to the Edinburgh plan, they may be regarded as identical (!), unless some proofs of their nature be also admitted, for both will answer to the tests proposed."

Mr. Phillips appears to regard the mind of a pharmaceutist as a mere *tabula rasa*, and to consider that he who consults a dispensatory is in a state of the most deplorable ignorance; in short, that he requires to be informed of every chemical property, however minute, of each particular substance, or he will incur the risk of dispensing corrosive sublimate for camphor, and arsenious for benzoic acid! Now, although we admit that there is great ignorance among the class of druggists, we cannot go so far as to believe that substances of this kind are liable to be confounded with each other. Dr. Christison probably entertained the same opinion, and did not consider it necessary to enter into further details. Had he done so, it is not unlikely that he would have been censured by certain critics for overloading his Dispensatory with facts, which must or ought to be familiar to every tyro. Mr. Phillips must very well know, that although arsenious acid and benzoic acid resemble each other in being entirely sublimed by heat, the effect of heat is widely different on the two substances. Benzoic acid melts and burns. Is there any person in the three kingdoms, likely to consult the *Edinburgh Dispensatory*, who is not aware that arsenious acid neither melts nor burns? Dispensatories are not intended to be compilations of the mere rudiments of pharmaceutical chemistry: and if slight omissions of this kind are to be designated as grave errors, or even to be paraded as subjects for serious criticism, there is not a single work on chemistry or pharmacy, in any language, which is not open to objection.

The concluding part of the pamphlet—On the present state of Pharmacy in England, is more satisfactory. It establishes a fact, which has been long suspected, that not only do pharmaceutical preparations differ in strength and quality to a very considerable extent at the shops of different druggists, but that there is unfortunately, so far as nomenclature is concerned, the grossest ignorance in dispensing them. To the prescribers of hydrocyanic acid the following fact will be of some interest. Mr. Phillips had gone the round of four chemists' shops with a plainly-written prescription for *hydro-*

caloric acid, and he had procured this acid of a different strength and quality at each shop. On arriving at No. 5, he says:—

> "The chemist (druggist?) to whom I last applied to have the prescription prepared, in which twenty drops of hydrochloric acid were directed to be taken twice a day, referred to the Pharmacopœia, and, as I believe, to a posological table. He mentioned that the dose was a large one, but having assured him that the necessary precaution would be observed (!) he omitted to put the number of the drops to be taken, and gave me *hydrocyanic* instead of hydrochloric acid."—p. 41.

While the ignorance of the druggist, in this instance, calls for severe censure, we do not think that the concoctors of the last Pharmacopœia are wholly free from blame. We do not see why the old name of Acidum Muriaticum should not have been retained. It would have been no greater disgrace to pharmacy to have retained this old and well-known name, than it is to chemistry to retain that of oxygen,—a name which is now known to be just as applicable to hydrogen as to the gaseous element which is universally known under this designation. These frequent changes in pharmaceutical nomenclature are productive of little theoretical benefit, and of the greatest practical mischief. The old prescribers and dispensers will not go to school again to learn the new names, and by the time another generation has taken their place, another nomenclature has sprung up. Had the acid been described by the terms Acidum Muriaticum, there would probably have been no mistake:—but this extreme itching for pseudo-classical purity and technical precision, must inevitably lead to such blunders. A man may, it is true, be in this way poisoned by taking prussic for muriatic acid; but then there is the satisfaction of knowing that he falls a victim to the carrying out of a scientific principle; namely, that all acids, in which hydrogen is an important constituent, should begin with the prefix *hydro!* The principle can after all only have a limited application, and where the change is liable to be attended with the danger of substituting an active poison for an innocent medicine, nothing can justify it.

Mr. Phillips appears *to have been* very successful in entrapping druggists by the use of the words *Hydr. Pot.* in his prescriptions. *Iodide of Potassium* was given to him on three occasions for hydrate of potash! Can we be surprised at it? Assuredly not: and for the reasons above stated. The London College, in 1836, adopted the principle of endeavouring to force on dispensers an entirely new nomenclature, in accordance with the then state of science; while they seem to have overlooked the fact, that there was no institution in this country by which the education and knowledge of those into whose hands prescriptions invariably fall, could be legally superintended or controlled!

Taking these circumstances into consideration, it is somewhat surprising that so few accidents have occurred owing to this absurd and unnecessary change in the names of pharmaceutical compounds.

Corrosive sublimate is now distinguished from calomel in the Pharmacopœia of the London College only by the prefix "Bi." In the next edition, if the College remain consistent to the principles which guided them in 1836, we shall most probably find corrosive sublimate under the name at present applied to calomel: for many eminent chemists now regard the red oxide as a protoxide of mercury: hence the bichloride would become a chloride! The disposition to name substances according to the theories of a fluctuating science, has therefore involved the College in this dilemma. If they preserve their consistency, we shall have a formidable poison sold under the name of an innocent medicine; or if they depart from their former rule, and retain the present names, the nomenclature will be in opposition to that taught in works and lectures to the rising generation of chemists and medical practitioners. In either case the public, who send their prescriptions to druggists, will stand a good chance of being poisoned *secundum scientiam*. There appears to us to be only one escape from the difficulty,—*i. e.* to return to the old names of Calomelas and Mercurius Corrosivus Sublimatus of the Pharmacopœia of 1720. These designations may not be so elegant or scientific; but they have the advantage of being understood by all, whether learned or unlearned, and of not being liable to change by the progress of discovery.

From the remarks which we have made, our readers will judge that these "Observations," if we except the concluding portion, are not likely to furnish much profitable reading. Those who do not understand the chemical facts will take no interest in the criticism; while those who do understand the details will, we think, regret that Mr. Phillips should have occupied his time in raking up errors which are for the most part trivial and unimportant.

REMOVAL OF A FISH-HOOK FROM THE ŒSOPHAGUS. BY ANDREW R. KIRKPATRICK, M.D.

In the summer of 1837, Mrs. —— was enjoying her usual *siesta* in the afternoon of a warm day, on a pallet spread upon the floor in a cool part of the house; and, while she was lying on her back, sleeping pleasantly, a little urchin, her grandson, was playing about the house with a fishing tackle complete—pole, line, and hook; who, when he discovered the old lady with her mouth widely distended, thought it was a fine opportunity to "catch a fish." Accordingly, in order to effect his purpose, he cautiously deposited the "barbed hook," (the author believes there was no *bait* on it,) within his grandmother's open mouth. The titillation caused her to awake suddenly, and as her mouth was dry from exposure, she closed it, and swallowed the hook two or three inches below the uvula. So soon as she discovered her situation, the whole family was assembled by her cries of distress, except the little culprit, who had dropped his pole in a panic, and vanished. Some gentle efforts were essayed to remove the hook, both by the patient and some of the family; but, being apprehensive of fixing the barb in the throat, they ceased all efforts, and dispatched a messenger for Dr. E. Leroy Antony, who resided in the neighbourhood. When he arrived, and found that the hook was not fastened into the flesh, his fertile brain suggested a plan by which it could be removed safely and easily. His plan was, to cut off the line within a foot or two of the mouth of the patient; then to drill a hole through a rifle bullet and drop it over the line, down on the hook. In order to fix the bullet on the point of the hook, and maintain it firmly in that position, a reed was procured, the joints punched out, and then passed down over the line, and pressed firmly over the bullet. In this manner the hook, bullet, and reed were all withdrawn at once, very easily, without any injury to the œsophagus or fauces.—*The Medical Examiner (Philadelphia).*

Hospital and Infirmary Reports.

CLINICAL REPORT OF SURGICAL CASES,

At St. Bartholomew's Hospital.

BY LUTHER HOLDEN, F.R.C.S.
Demonstrator of Anatomy at St. Bartholomew's Hospital.

Chronic abscess in the right iliac fossa. Disappearance of the abscess by absorption of its contents.

CASE I.—G. S., a young man, æt. 24, of slender frame and hectic appearance, came under the care of Mr. Stanley with a large abscess in the right iliac fossa, which had passed beneath the crural arch on the outer side of the femoral vessels. Fluctuation was readily perceptible over the whole extent of the swelling, which comprised a space of considerable extent, partly above and partly below Poupart's ligament. There was no ground for suspecting disease of the spine.

After remaining some time in the hospital, the abscess undergoing no change, the patient was recommended to take the advantage of country air, and, if possible, a residence by the sea-side. Accordingly he spent the summer months at Margate, and has since returned to London in perfect health, and with no perceptible remains of the abscess.

Fluctuating swelling in the situation of the internal abdominal ring, consequent on abscess in the iliac fossa. Puncture. Recovery.

CASE II.—Abraham Stockley, æt. 24, a robust-looking young man, by trade a butcher, was admitted under Mr. Stanley in June 1845, with a large soft swelling in the situation of the left internal abdominal ring. The tumor was oval in form, and situated just above Poupart's ligament, with the direction of which its long axis (three inches) corresponded. There was forcible impulse on coughing. On first view, the swelling was mistaken for a hernial protrusion, but subsequent more accurate examination detected a fulness in the left iliac fossa, between which and the external tumor there was very perceptible fluctuation. The man gave the following history of his case. About six months previously he sprained his loins whilst lifting a pig, and experienced for some days afterwards considerable pain in the back. About six weeks ago, there arose, at the lower part of the abdomen, the present swelling, which has been gradually increasing in size, without accompanying pain or other inconvenience. His general health has been and continues good, and there is no ground for suspecting disease of the spine.

After remaining a fortnight in the hospital the nature of the case was manifest. The integuments became discoloured at the upper and outer part of the thigh, where fluctuation being evident, an opening was made, and gave exit to one pint and a half of creamy, creamy flaky pus. No constitutional disturbance arose, and the patient left the hospital perfectly well in a few weeks afterwards.

Formation of matter in the iliac fossa after parturition. Puncture. Recovery.

Case III.—H. P. æt. 33, the mother of seven children, was confined in October 1845. The labour was protracted, and there was some difficulty in extracting the placenta. In the month of March 1846, she was admitted under the care of Mr. Lawrence with a deep-seated fulness in the left iliac fossa. Pressure in this situation caused severe pain, and the temperature of the superincumbent skin was increased. Her strength was very much reduced. She was labouring under hectic fever, with frequent shivering and profuse perspiration, and her nights were sleepless on account of the pain in the left side. It was necessary to give her beef-tea, with half a pint of port wine every day, and five grains of the Pil. Sap. c. Opio at night to relieve the pain. Six leeches were applied to the side. In spite of this treatment, the local and general symptoms continued to increase in severity. On the twelfth day after her admission, Mr. Lawrence detected deep-seated fluctuation in the iliac fossa, and plunged a lancet to a considerable depth by the side of the crest of the ilium: eight ounces of healthy pus was discharged through the opening, which was followed by very beneficial relief of all the symptoms. A free discharge of matter took place through the wound for some days afterwards. The woman left the hospital in three weeks with every prospect of a perfect recovery.

Large abscess in the iliac fossa extending beneath Poupart's ligement into the thigh after parturition. Puncture. Recovery.

Case IV.—A. F., æt. 25, a delicate-looking female, the mother of four children, has enjoyed good health till her last confinement, which took place three months ago. The labour was protracted, and followed for some time afterwards by severe pains in the uterus, with a discharge of purulent matter from the vagina. At the end of the fifth week she resumed her occupation as domestic servant, and struck the upper part of the right thigh against the edge of a table. The injury occasioned a slight pain, which soon passed off. In a fortnight afterwards she was attacked by a severe pain in the loins; the pain returned also in the injured thigh, and progressively increased till she was unable to walk, or even place her foot upon the ground. In this condition she came into the hospital, under care of Mr. Vincent, in May 1846. There was a soft deep-seated swelling occupying the right iliac fossa, and extending beneath the crural arch to the outer part of the thigh. The swelling was acutely painful on pressure, and communicated distinct fluctuation. Passive motion of the thigh occasioned no uneasiness, and therefore justified the belief that there was no disease of the hip-joint. In other respects she was seriously ill. She had a cough, with a quick irritable pulse, and profuse perspirations at night, during which she could get no rest.

The treatment consisted in the administration of tonic medicines, with morphine at night, and a large poultice to the groin. Beef-tea and wine. Leeches were applied to the groin on several occasions, with partial relief of the pain.

After this plan of treatment had been adopted for three weeks, it was evident that the symptoms were not improving: the swelling was increasing in size, and productive of such continued suffering, that an opening was made immediately below the crural arch. Nearly two pints of matter were evacuated. Immediate relief of the local and general symptoms was the result. There was a free discharge of matter for some time through the puncture before it permanently closed. No fresh accumulation arose. The woman gradually regained her strength and flesh, and left the hospital fit for service two months after her admission.

Suppuration in the lower part of the abdomen between the layers of the abdominal muscles, after parturition. Puncture. Recovery.

Case V.—A female, æt. 27, was admitted under Mr. Stanley, having, eight weeks previously, suffered a tedious labour, which was followed by constant pain in the lower part of the abdomen, with occasional fits of shivering. A swelling gradually formed in the abdominal walls, extending from the right side of pubis upwards to the anterior spine of the ilium. The swelling became softer, and the skin covering it more discoloured. It was punctured, and twenty ounces of healthy pus were discharged. The constitutional disturbance, which had been previously considerable, subsided, and the recovery was complete.

On the first view of the case, it was a question whether the abscess did not originate within the abdomen in the cellular tissue of the iliac fossa; but from its subsequent progress and termination, there could be no doubt that the abscess was wholly confined to the walls of the abdomen, its seat being in the cellular tissue uniting the abdominal muscles.

Tumor on the front of the abdomen in the right lumbar region. Proved to be abscess, between the abdominal muscles.

Case VI.—R. W., æt. 10, came under Mr. Lawrence's care in the month of January 1846. About six months previously she fell down a flight of stone steps, and injured the right side. Soon afterwards the mother noticed a swelling in the right lumbar region, about the size of a pigeon's egg. The tumor gradually increased without pain till it attained its present magnitude, that of a hen's egg. The tumor is apparently solid, quite free from pain, and occasions no inconvenience. At the end of the fifth week, Mr. Lawrence, feeling indistinct fluctuation, introduced a grooved needle, along which a small quantity of pus was observed. In a few days afterwards the tumor, becoming much enlarged and discoloured on the surface, burst, and discharged a quantity of healthy pus. The swelling disappeared, and the child left the hospital well.

Serous cyst between the layers of the abdominal muscles in the left iliac region.

Case VII.—James Rayner, æt. 36, was admitted under Mr. Stanley's care in May 1845. This man states, that about ten months ago he injured his side whilst dragging chain cables in Sheerness Dockyard. Soon afterwards a swelling arose on the lower and left side of the abdomen, just above Poupart's ligament. A surgeon, whom he consulted, pronounced it to be a rupture. The man pursued his work, and the swelling increased rapidly in size. After the expiration of four months, he consulted another surgeon, who at once punctured the tumor, and let out nearly a pint of yellowish watery fluid. The opening closed, and after eleven weeks the swelling arose as large as before, and was punctured a second time, giving exit to a similar kind of fluid. The swelling, after some weeks, appeared a third time, and the man, impatient of this repetition, came up to London for further advice.

On his admission into the hospital, there was an oblong swelling on the left side, of the size of a small cocoa-nut, circumscribed, loose and moveable on the lower part of the walls of the abdomen, just above Poupart's ligament.

After the history given by the patient, Mr. Stanley had no hesitation in puncturing the swelling, and let out half a pint of serum. In the course of ten days the swelling reappeared, accompanied by considerable pain and general constitutional disturbance. Inflammation had evidently taken place in the walls of the cyst. It was necessary to make a free opening and evacuate the contents, which consisted of a large quantity of purulent fluid. The local and general symptoms were quickly relieved by this measure, and the cyst was ultimately completely obliterated.

Large abscess at the lower part of the abdomen, containing fœtid air and pus.

Case VIII.—A corpulent lady, 60 years of age, who had always enjoyed excellent health, was attacked with pain in the lower part of the abdomen after unusual fatigue. A painful swelling subsequently arose on the right side of the abdomen, and gradually increased till it occupied the whole space between the ilium and umbilicus. At the same time she had much fever, and could get no evacuation from the bowels. The constipation was relieved by active aperients, but no diminution took place in the size of the swelling, which, on the contrary, attained an enormous magnitude, and became remarkably elastic and resonant on percussion. Under these circumstances no surgical interference was considered prudent. After three days, a part of the swelling, where the skin had become thin and discoloured, was punctured. A quantity of fœtid air, having a strong fæcal odour, escaped through the opening, and was followed by two pints of equally fœtid pus. There was no subsequent re-accumulation of matter, or any unfavourable symptoms. The lady has since perfectly recovered under judicious treatment by the sea-side.

Chronic abscess in the concavity of the left ilium, existing in connexion with angular curvature of the spine.

Case IX.—Charles Williams, æt. 12, a pale hectic-looking lad, was admitted under care of Mr. Lawrence in March 1842. The boy states, that five years ago he fell from the roof of a barn, and injured his back. The accident was followed by no serious consequences, except occasional pain in the loins. Three years afterwards a small swelling arose in the left groin, accompanied with pain in the left leg; but the symptoms subsided after a residence of nine months by the seaside. The spine began to project about twelve months ago, and the swelling returned in the groin, with pains in both lower limbs.

On admission into the hospital there was a large collection of matter occupying the left iliac fossa, and extending beneath Poupart's ligament into the thigh. There was also an angular curvature of the spine, including five of the lower dorsal and three of the upper lumbar vertebræ. General health declining. Issues were made on either side of the spine, and he was allowed a generous diet, with steel wine.

This plan of treatment was steadily pursued for four months, at the expiration of which he left the hospital, remarkably improved in health, and with scarcely any remains of the abscess in the iliac fossa.

Abscess in the iliac fossa, existing in connexion with psoas abscess, without any disease of the spine.

Case X.—A young man, æt. 21, with a feeble constitution, was admitted under the care of Dr. Burrows in March 1846, in consequence of an attack of acute rheumatism affecting many joints. There was also a large collection of matter in the right iliac fossa, extending beneath Poupart's ligament, a few inches down the thigh, on the outer side of the femoral vessels. There was no ground for suspecting disease of the spine. Soon after his admission into the hospital, he died suddenly from inflammation of the membranes of the brain.

On examination after death, it was discovered that the matter in the iliac fossa was situated between the iliacus internus muscle and the fascia. This abscess, communicating with the sheath of the psoas, extended along this muscle as high as the third lumbar vertebra. There was no discoverable disease of the structures entering into the formation of the spine.

Abscess, probably lumbar, presenting above the crural arch.

Case XI.—J. D., æt. 27, came under the care of Mr. Lawrence in May 1842. He is a man of irregular habits, and has had good health till two and a half years ago, when he caught cold after bathing, and has since that time suffered from occasional pain in the back. During the last twelve months the pain has become more severe, extending down the thigh, and rendering him incapable of work. A small swelling, unattended with pain, arose in the lower part of the abdomen, just above Poupart's ligament. The swelling has existed for five months, is at the present time as large as the closed fist, oval in form, with its long axis parallel to the crural arch. It is soft and fluctuating, and communicates a strong impulse on coughing. No curvature of the spine. Moxas were applied on the loins. Patient left the hospital for the country without visible improvement.

Iliac abscess in consequence of disease of the hip-joint.

Case XII.—A man was admitted under Mr. Stanley with an abscess in the iliac fossa, which had burst through the walls of the abdomen, just above Poupart's ligament. The disease was supposed to have originated in the loins. There was also evidence of disease in the hip-joint.

The man died, and, on examining his body, it was found that the cartilages of the hip were entirely destroyed. The joint was full of pus. The capsule had ulcerated in front, and allowed the matter to pass from the interior of the joint upwards in the tract of the psoas and iliac muscles, where it formed a tumor, which burst through the walls of the abdomen. There was no extension of the abscess to the loins.

Case XIII.—An abscess in the iliac region may be a consequence of disease in the joints of the pelvis. A few years ago, a man was admitted into the hospital under Mr. Stanley with a large fluctuating swelling in the groin, just above the crural arch. His health having been much impaired by other disease, he died.

On examining the body, extensive disease was found in the sacro-iliac symphysis. A large abscess had formed in the cellular tissue of the pelvis, thence passing beneath the lower border of the internal oblique and transversalis muscles, had made its way into the inguinal canal, and presented in the groin.

Abscess in the iliac region, originating from disease of the cæcum.

Case XIV.—A man, æt. 36, after having occasionally discharged blood from the intestines, felt a pain, and soon afterwards a swelling, in the right groin. These symptoms steadily increased, and had existed three weeks, when he came into the hospital. The swelling in the groin was very tender. The fæces were solid, but mixed with blood. He had a small frequent pulse, a dry brown tongue, and sleepless nights. He grew worse; and, on the fifth day, an opening was made in the groin, in which there was perceptible gurgling. A quantity of air and purulent matter escaped, having a strong fæcal odour. He sunk on the eighth day. On examination after death, it was found that the abscess in the groin communicated with a large cavity full of fœtid pus, situated between the peritoneum and the walls of the abdomen. At the bottom of this cavity lay the cæcum and part of the colon, the coats of which were perforated by four large apertures through which the finger could pass.

Abscess in the right iliac fossa, connected with disease of the cæcum.

Case XV.—W. L., æt. 30, has enjoyed good health till last winter, when he became subject to a cough, accompanied with shortness of breath. In March, 1845, he was attacked, without apparent cause, by a general pain in the abdomen, more particularly acute on the right side. After two days' confinement to bed, he observed a swelling in the right iliac region. This swelling was successively leeched, blistered, and poulticed, without any benefit.

On the 2d May he was admitted into the hospital, under the care of Mr. Lawrence. There was a large fluctuating swelling, with a circumscribed thick margin, in the right iliac region. His general health was much impaired; his pulse was feeble, his tongue foul, and the appetite lost.

May 16th.—As the swelling was continually painful, and increasing in size, Mr. Lawrence made an opening, through which there escaped eight ounces of fœtid pus, mixed with air and dark-coloured lumps. It was observed that more fluid escaped than what was consistent with the size of the external swelling.

He was ordered good diet, with quinine, wine, beef-tea, and an opiate at bed-time.

20th.—Health improved. Air escapes from the wound, with a free discharge, tinged with bile.

30th.—Fæcal matter passes through the wound.

After continuing many weeks in the hospital, the external wound had nearly healed, when symptoms of rapid phthisis came on, and caused his death.

No examination was allowed.

Remarks.—The object of the foregoing cases is to direct attention to some of the chief practical points connected with abscesses in the iliac region, and to show under what various circumstances and causes they may arise.

Thus, they may be contrasted with each other, and also with other diseases for which they might be mistaken.

This class of cases is by no means of unfrequent occurrence Their obscure origin and insidious progress often render the diagnosis obscure, and consequently the treatment inappropriate. The inguinal and iliac regions may be the seat of other swellings closely resembling them in their external characters. Case II. is an example where an iliac abscess, bulging into the inguinal canal, was mistaken on first view for a hernial protrusion. A case is related in the 20th vol. of the "Archives de Médecine," in which a stercoral tumor in the right iliac fossa was mistaken for an abscess. An opening was considered indispensable by several experienced surgeons. An injection was accidentally administered, which caused the total disappearance of the swelling.

Mr. Stanley, in a clinical lecture on this subject, mentioned the following as among *the chief circumstances under which abscesses in the iliac region may arise.*

1st. Iliac abscess may be a continuation of psoas abscess existing with or without disease of the spine. In illustration, see Cases IX. and X.

2d. An iliac abscess may arise in consequence of disease in the bones and joints of the pelvis. Case XIII.

3d. Iliac abscess may be a consequence of disease in the hip. Case XII.

4th. Iliac abscess may result from inflammation in the cellular tissue of the iliac fossa. Cases I. II. III. IV.

5th. An abscess may present in the iliac region in consequence of suppuration between the layers of the abdominal muscles. Cases V. VI. VII. VIII.

6th. Iliac abscess may be a consequence of disease of the cæcum on the right, and the colon on the left side. Cases XIV. XV.

Mr. Stanley further directed attention to the fact, that in many instances these abscesses were apparently connected with parturition; so far, at least, that they arose shortly after the patients had suffered severe and protracted labour.

The cases related show the impropriety of interference with the iliac abscess, except under the circumstance of the constitution suffering severely from the confinement of the matter; or when the parts are undergoing such changes as to indicate that the abscess would certainly burst if not opened. It is desirable, of course, that the opening should be sufficiently free, to prevent any lodgment of matter within the abscess; and it will be observed, that many of the cases thus treated proceeded favourably to a complete cure of the disease.

Medical Trials and Inquests.

THE RESULTS OF INTERMENT IN TOWNS.—MAGISTERIAL INVESTIGATION.

Worship Street, Sept. 11th, 1846.

Two men, carters in the service of Mr. John Gould, dust contractor for the district, appeared before Mr. Broughton, to answer the charge of having unlawfully and indecently exposed certain portions of human dead bodies, and also certain coffins or portions thereof, in and near a certain highway in the parish of Shoreditch, on the 5th inst.

The first witness called was John Roe, a labourer in the service of Mr. King, owner of the waste in question, who stated that between 6 and 7 o'clock on Saturday morning, while in his master's field, a cartload of stuff was brought there by the defendant Wright, who shot it amongst the other rubbish the ground; and observing that it was tirely composed of broken coffins, plates, adles, and human bones, witness inquired ence it came, to which the defendant at st made no reply, but afterwards said that had brought it from a vault which had not en cleared out for 50 years. The defendt then asked how much they allowed for ch a load, and on being told that he would t nothing, appeared much dissatisfied, and id if he had not understood that he would ceive 4d. a load, he would not have brought there. Both defendants afterwards reurned with two other loads, containing milar matter, which they also deposited the same place.

John Gardiner, a hawker, deposed to ving seen a crowd of persons congregated er the deposit in question, in which he served a human scalp with hair upon it, veral bones with flesh adhering to them, d numerous fragments of coffins, some of em half lids and sides, and so sound that ey could not have been more than two o years under ground. The assembled owd were busily engaged in carrying off e spoil, and amongst them he observed a y with a bushel basket full of coffin rniture, and a young man with a spring rrow completely laden with metal plates nd coffin handles, which they were taking ay for sale! He also saw a hair bed, not uite perfect, but which had evidently just ome out of a coffin, and his feelings so volted at the disgusting exhibition, that he mediately gave information to the police.

Henry Longman, a lad in the service of r. King, next spoke as to the nature of he deposits brought to the field by the efendants, and said that he had himself ecured a number of plates and handles, which he afterwards sold to a marine-store ealer for 11½d. He and another boy broke n half nearly a whole coffin, in which were ones and hair, the latter lying upon a sort f bed, and a quantity of other hair adhered o the outside of the coffin. There were great quantities of bones among the refuse.

Elizabeth Norris deposed to the loathsome haracter of the deposits, and said that among he refuse that was kicked about, she observed thigh bone with flesh upon it as broad as er hand, and a foot in length, a spinal bone lso with flesh attached to it, a silk handerchief stained with blood, evidently used to e up a person's jaw, and a woollen mattress till bearing the impression of a human gure.

Joseph Morris, a gardener, gave similar vidence, and stated that the mass which he aw wholly consisted of fragments of coffins, lates, and handles, and that there was no arth with them whatever. He also deposed o finding a perfect jaw-bone, with the teeth ntire.

Samuel Shearman, a marine-store dealer, proved having purchased 44lb. of metal plates and handles, which had been brought in various lots to his shop! and afterwards taken away by the police and parish officers.

Waller, the beadle, produced several plates, the inscriptions on two of which were perfectly legible, and bore the respective dates of 1818 and 1834. The witness added, that under the directions of the churchwardens of Shoreditch, all the human remains that could be collected had been since decently interred in consecrated ground.

Holland, the warrant officer, produced several pieces of coffins, and stated that such fragments had been extensively dispersed about the neighbourhood, and that in five houses alone he found at least a cartload.

On being called upon to answer the charge, the defendants severally said that they had been directed by the niece and sister of their master to proceed, at 3 o'clock on Saturday morning, to cart away some rubbish from the vaults of the church in Friday-street, and in which they were assisted by the street-keeper, grave-digger, and other persons. They were not aware of what the rubbish consisted, but afterwards conveyed it by their foreman's orders to the field in which it was discovered.

Mr. Broughton here addressed the authorities of the city parish, and said, that as their names had been rather freely mentioned, he considered it but right that they should be allowed an opportunity for explanation.

Mr. Grueber immediately rose, and said, that the facts of the case were, that in consequence of the accidental sinking of the vicar's vault, during the construction of a new sewer, about eighteen months since, such an intolerable effluvium had arisen from the displacement of the coffins as to cause the greatest annoyance to the parishioners. An order had therefore been issued by the vestry for the clearance of the vault, which the churchwardens had not only given strict injunctions to carry out with the utmost decorum and propriety, but had personally inspected the sifting of the refuse for nearly a week, and caused every bone that could be discovered to be reinterred in the vault. They had several witnesses in attendance to prove that their orders had been literally obeyed at the church, and that the bones which were afterwards found in the field must necessarily have been brought from some other place. The most positive directions had also been given to Mr. Gould, *who had been employed by other parishes on similar occasions*, to provide a proper receptacle for the remains, which he had engaged to do, and the first intimation the churchwardens had received of his non-compliance with their directions was conveyed to them through the public journals.

The magistrate committed the man for trial.

Mr. Hobler addressed the bench to the same effect on behalf of Davis, the beadle, who had faithfully fulfilled his instructions, and submitted that if any outrage had been inflicted upon public decency the culpability rested alone with the contractor. (!)

Both the churchwardens also addressed the magistrate, and strongly urged the examination of Davis and other witnesses as to the above facts; but

Mr. Broughton declined to receive their evidence, as he had no power to investigate the first part of the transaction, which had occurred beyond his jurisdiction.

Mr. Mair, the junior churchwarden of St. Matthew, then said that, as a demonstrative proof that the evidence had been greatly exaggerated, he held in his hand an extract from their parish register, which established that only 51 burials had taken place in that vault since 1809; and, as 49 still remained, of which only one was composed of wood, it was perfectly manifest that such an immense mass of broden coffins could not have come from their vaults.

Mr. **Broughton** expressed himself of opinion that a most improper course had been adopted in employing a common dust-contractor to fulfil such a duty, which ought to have been performed under the superintendence of the churchwardens, and with the direct sanction of the ordinary of the diocese, in ground selected by themselves. *The whole transaction was a gross outrage on public decency, which had no parallel within his recollection*, and as it was clearly an indictable offence, he should require the defendants to put in bail to answer the charge at the sessions, themselves in £30, and two sureties in £25, and leave it for the consideration of the parish authorities of Shoreditch to carry out the prosecution.

Correspondence.

TREATMENT OF BURSAL DISEASE OF THE KNEE-JOINT.

Sir,—In your number of Aug. 28th, I find a paper on bursal disease of the knee-joint by Mr. Skey.

The plan of passing a bit of sewing-silk through the centre of the tumor I have practised for the last fifteen years. It has never failed in my hands, and I do not think that I have ever allowed the silk to remain longer than through the third day. When the inflammation has been very considerable, I have always enjoined rest, and *applied a few leeches*, followed up by a liq. plumbi lotion previous to introducing the silk.—I am, sir,

Your obedient servant,
John Richard.

Leamington, Sept. 10th, 1846.

Medical Intelligence.

THE CHOLERA IN SCINDE—TREATMENT ADOPTED BY THE NATIVES.

The following is the latest intelligence which we have of the progress of the cholera among our troops in Scinde:—

Cholera had at length reached Hyderabad. It made its appearance at Jurruck about the beginning of July. It was next heard of in the city, where 100 were said to have been cut off on the 5th. There had only been two fatal cases in the fort. It was beginning to make sad ravages in the gaol. A cholera hospital had been established, and every measure requisite to meet or mitigate the apprehended visitation which skill could suggest, had been adopted.

Letters of the 16th have been received from Kurrachee, with tidings of various dates from different parts of Scinde. Though not yet provided with a complete return of the casualties occasioned by the late pestilential visitation, we see no reason to doubt the correctness of the following account. The total loss up to the 10th is set down for the 86th Regiment at 17 sergeants, 13 corporals, 2 drummers, and 212 rank and file, or 244 in all; with 15 women and 11 children,—making a total of 270. The Rifles had lost 91; the Fusileers 86; and the Artillery 50 or 60—giving a total of 481 fighting men, besides natives,—a formidable list enough, but less so by half than that formerly supplied. The *Witness* gives 126 in place of 81 as the number of deaths amongst the Fusileers; and, if correct in this, the total deaths of European soldiers will amount to 526. Fearful ravages appear to have been committed by cholera in the fort of Hyderabad, and all the lesser criminals were wisely and humanely ordered to be liberated. Lieutenant Campbell, of the 17th Native Infantry, had fallen a victim to the disease. A general panic seemed to prevail amongst the inhabitants.

The native treatment of cholera is immediately to drink as much sour milk as they can get hold of. They then wet their dirty clothes, and wrap themselves up in them, wetting them from time to time.

The application of hydropathic treatment, by the natives of Kurrachee, to the cure of spasmodic cholera, strikes us as being not a little curious. We lament to announce the death of Captain John Napier, military secretary to the Governor of Scinde, which took place on the 7th. He was the last victim to the dreadful disease which has carried so many to the grave. A private letter mentions that he was taken ill at 4 P.M., and died at 10 at night, universally regretted.

THE CHOLERA IN PERSIA.

The last Levant packet which arrived at Malta brought the intelligence that the cholera had broken out in Persia, particularly at Teheran, where one of the brothers of the Schah has fallen. The Schah, with his court, had sought refuge in the mountains. It is feared that, as in 1832, this scourge may again visit Asia Minor and the Mediterranean.

The latest intelligence from Aden announces that the cholera had disappeared from that place, and that the troops were healthy.

METHOD OF PREVENTING THE NAUSEA PRODUCED BY CASTOR-OIL.

In order to obviate the nausea so frequently produced by castor-oil, and which constitutes a great objection to its use among patients, M. Righini proposes to mix it with syrup and gum arabic, according to the following formula:—

Castor-oil . .	30 parts.
Sugar . . .	30
Water . . .	100
Powder . . .	8

The whole is made into an emulsion, and the juice of an orange squeezed into it. The serious objection to this plan is obviously that it increases so considerably the bulk of what the patient has to swallow, and thus, in removing one evil, it substitutes another.

ANALYSIS OF COFFEE.

From his recent analyses of coffee, M. Payen finds that this substance contains from 10 to 13 per cent. of fatty principles.

THE POTATO DISEASE IN FRANCE.

According to information received from various parts of France it would appear that the bad accounts of the disease amongst potatoes in that country have been greatly exaggerated. In some districts, indeed, ravages had been committed among the crops, but the effect was quite local.—*Gazette Médicale.*

VACCINATIONS IN TURKEY.

It is stated that the Sultan is extensively patronising vaccination. At each stage of his journey he causes the children of all classes, Turks and Christians, to be brought to him, and he has them vaccinated *in his presence. In order to enhance the value of* the operation, and render it popular, he bestows money on all the poorer parents.—*Ibid.*

THE HOSPITAL ST. JEAN AT BRUSSELS.

The Hôpital St. Jean, at Brussels, has been recently pulled down. Among the ruins a number of medals and old coins were found. —*Ibid.*

EFFECTS OF PHOSPHORUS VAPOUR.

M. Dupasquier states that the vapours of phosphorus do not exert that prejudicial influence on workmen which has been attributed to them, but that they only give rise to a degree of bronchial irritation by no means severe, and which speedily disappears. —*Ibid.*

STATISTICS OF PAUPER LUNATICS.

From a Parliamentary document, just printed, it seems that in January last there were as many as 16,310 lunatics and idiots chargeable in England, and 1,205 in Wales, making, with an estimate of 372 for places not in union with parishes, 17,887; of which number 9,712 were lunatics, and 8,175 idiots. The number in county asylums in England was 4,675; in licensed houses, 3,363; and in union workhouses, 4,397; whilst 3,873 were with their friends or elsewhere. In England 5 were under 5 years old, 61 from 5 to 10, 940 from 10 to 20, 3,158 from 20 to 30, 3,682 (the largest number) from 30 to 40, 3,584 from 40 to 50, 2,563 from 50 to 60, 1,575 from 60 to 70, and 699 from 70 years old and upwards. Of the 16,310 lunatics and idiots in England, 4,244 were dangerous to themselves or others.—*Law Times.*

ON THE THEORY OF CELL DEVELOPMENT.

On the subject of the cell theory, about which so much has of late been written, yet over which so much doubt and obscurity still hang, some observations recently made by Mr. Paget in his report,* are especially valuable at the present time, inasmuch as numerous facts have been latterly brought to light, the general tendency of which is to throw considerable doubt on the present view of the subject, and to render questionable the universal applicability of the cell doctrine to elucidate the process of development in all the organic tissues. Hitherto a sort of blind adherence to this doctrine has characterized the writings of most physiologists on the subject; and if any have ventured to depart from the almost universal custom of attributing the great processes of growth, development, and the formation of all tissues, entirely to the agency of cells, they have but expressed their dissent quite casually, and have speedily fallen back into the beaten path so successfully trod by Schleiden and by Schwann, and have continued, with others, to follow it almost without question and without doubt as to its being the true one. After alluding to the most recent observations which have been made on this subject, Mr. Paget proceeds as follows:—

---

* British and Foreign Medical Review, July 1846.

The general tendency of the whole is to show that we are yet very far from the knowledge of the true mode of development of the nucleated cell in animals. There is indeed in all the essays just noticed, as well as in the personal knowledge of most anatomists, an abundance of facts bearing upon the subject; but many, perhaps the majority, of these facts cannot be brought within the expressions of Schwann's theory of cell development: neither can there be yet traced in them any single, uniform, and constant mode of development of the nucleated cell. From the very nature of the case it seems most probable that one law and one mode must be always observed in the development of the cell and its parts; if it be so, the one mode is unknown; if it be not so, then in the place of the fair comprehensive system of Schwann, we have a crowd of unconnected facts, such as no memory can contain, and of which it would be useless, even if it were possible, to give a brief report.

The observations of Reichert, as well as those in the other works just referred to, relate only, or principally, to the genesis of the nucleated cell and its several parts; and he implies that there is much less room for doubt concerning the metamorphosis of the cell itself, by which, of it or through it, all the more organized animal tissues are supposed to be formed. It appears to me, however, that we can be as little sure of many of the changes which nucleated cells are said to pass through in the formation of other tissues, as we are of the process by which the cells themselves are formed. The development of all the fibrous tissues appears especially doubtful: for the investigations of every year shew the great difficulty or improbability of confirming the observations by which Schwann explained the development of these and some other tissues, and the equal facility of finding appearances which cannot be reconciled with his theory, or any other single theory yet proposed concerning it*

I have found ample reason for expressing these doubts of the sufficiency of the accepted theories of development, in recent examinations of tumors and other morbid growths. Their structure seems peculiarly adapted for testing a theory of cell development; for they are, doubtless, obedient to the same general laws of formation as the healthy structures are, and in the unequal and often rapid growth of their several parts it could hardly happen but that in many specimens all the phases would be seen though which their structures pass towards their fully developed state. But in very numerous examinations I have not found a single example in which a cell has appeared to be forming or formed around a pre-existing nucleus: or one in which fibres have appeared to be formed out of nucleated cells: or one in which nucleated cells have appeared to constitute a stage towards any form of higher development. On the contrary, I have found many instances of rapidly growing structures composed of large collections of fibres without a nucleated cell among or near them; others with abundant nucleated cells, but scarcely any free nuclei or granules, and nothing like a cell incompletely developed round its nucleus; and again, others (and these of especially rapid growth) with no cells at all, but composed almost entirely of corpuscles like nuclei or cytoblasts.

From these and other observations I am disposed to think that the ordinary (and not the exceptional) mode of development of fibres is, not through nucleated cells, but from a structureless or dimly granular substance which is first *marked* and then broken up into fibres. There is good evidence that the cytoblasts, which are usually or always imbedded in this substance, influence the development of the fibres; and though I cannot tell how they do so, yet it is certainly not by conversion of themselves into fibres; they shrivel and disappear as the fibres increase and become more perfectly formed.

I think it will be found that in morbid growths the nucleated cell is always a terminal, not a transitional form: for in certain tumors in which the best formed nucleated cells are found—*e. g.* the epithelial tumors and some examples of medullary cancer—there are no higher forms found, not even imperfect fibro-cellular tissue, except in small quantity about the blood-vessels. Corpuscles having the characters of nuclei or cytoblasts (to adopt still the usual names) appear to be the really energetic bodies in the growth and determination of these morbid structures; they are found in some tumors so abundantly, and so unmixed with nucleated cells, that their power of multiplying and assimilating cannot be doubted; and it is in some of these tumors also that, apparently under the influence of the cytoblasts, the most perfect fibro-cellular tissue is ultimately formed. What I have seen also of the development of these cytoblasts leads me to agree with that w of the development of nuclei generally, ording to which they are described as med, not on a pre-existent nucleolus, but of granules collected in a dark or dim s of the proper size and shape, which n clears up by the formation of a mem- nous wall and transparent fluid contents, h, in some cases, one or more persistent nules holding the position of nucleoli.

---

* A good evidence of this is in the fact that the most original observers, when they speak of the development of the tissues, almost always cease for the time to be original, and copy both *the words and drawings* of Schwann or Valentin.

Selections from Journals.

PATHOLOGY.

T-MORTEM APPEARANCES AFTER DEATH ROM LIGHTNING. BY DR. SCHAFFER.

e following account of the post-mortem earances found in the body of a healthy ldle-aged labourer, who was killed by a ke of lightning, is furnished by Dr. affer. The man was working in the ls with several other labourers, just after under storm had passed over, and appa- tly subsided. He was endeavouring to dle a light with a flint and steel, when the tning struck him. For a moment after shock he stood still, and then fell heavily he ground. The electric fluid entered at upper part of his forehead, perforating tearing his hat at that part: it seemed to have divided into two currents, which sed down the sides of the trunk, then g the lower extremities, and out at the . On the upper part of the forehead was d a soft swelling, of a dark blue colour, about the size of the palm of a hand; the which covered it was uninjured. From spot proceeded in different directions two red streaks. One passed to the left, ning over the temple, in front of the left down the neck to the surface of the chest, which it passed between the left nipple the axilla, and so made its way down the k to the left inguinal region, where it sed a large, irregular, scorched-looking ndige) patch on the skin. From this t the dark-red streak again continued its nward course, passing over the great hanter, then along the outer surface of left lower extremity to the back of the , where it terminated in several small -blue spots. The other streak, which eeded from the ecchymosed swelling on forehead, passed directly to the right ear, h was considerably swollen, and of a -blue colour. From the ear it run down- ls and backwards along the neck, crossed right border of the scapula, and even- y reached the right groin, where was d a scorched patch of skin similar to that he right groin. From this part the dis- ured streak was continued down the outer side of the leg to its termination on the back of the foot, just as on the left side. It is remarkable, that although the hair on the forehead was not burnt, nor that which occurred in any part of the track taken by the electric current down to the groin, yet at the groin itself, and at every part hence to the foot over which the electric stream passed, the hairs were completely burnt. The cause of the skin in the groins being burnt may probably be ascribed to the buckles of a belt which the man was wearing round his abdomen at the time of the accident, and which was completely destroyed. Nothing further worthy of notice was observed on the exterior of the body, with the exception of the face being very red. The swelling of the head was found to be due to the presence of a large quantity of extravasated blood. The bone beneath was not injured. Blood was extravasated also at other parts of the scalp, corresponding to the swollen discoloured places outside; about four ounces altogether was poured out. The vessels of the cerebral membranes were much congested; and the brain itself contained a large quantity of blood, especially the choroid plexuses. A large quantity of reddish mucus was found in the larynx, trachea, and bronchi. The lungs were loaded with dark blood; there was a great deficiency of blood in the cavities of the heart and in the large vessels. The blood-vessels of the stomach and intestines were more than usually congested. The right lobe of the liver was of a dark red colour and loaded with blood, especially at the part which corresponded to the burnt patch of integument at the lower part of the abdomen. The spleen also was large, and loaded with blood. Much blood was found accumulated in the substance of the muscular walls of the abdomen at those parts which lay beneath the burnt-surfaces outside.—*Oesterreich. Med. Wochenschrift*, 6 Juni, 1846.

CHEMICAL PATHOLOGY.

ON THE PRESENCE OF LARGE QUANTITIES OF FAT IN THE BLOOD. BY DR. HELLER.

In a state of health, no free fat, in the form of fat-globules, can be detected by the microscope in human blood; for the chief part of this ingredient, with the exception of cholesterine and seroline, exists in a saponified state. Inasmuch as chyle, however, after complete digestion, contains a considerable quantity of unsaponified fat, it follows that the free fat absorbed into the blood from this source must, during the metamorphosis which the blood undergoes, be converted into fatty acids. When, however, an inflammatory or other serious affection attacks any of the organs, which are largely concerned in the various metamorphoses which the blood undergoes, and the cells of which contain a considerable quantity of fat, as, for example, the liver, the kidneys, the lungs, and the peritoneum, then much unsaponified fat may be found in the blood, and the serum has, in consequence, a more or less opaque milky aspect. This fat usually occurs as an emulsion, combined with albumen; and its peculiar appearance beneath the microscope, as well as its chemical characters, shew that the fat is neither saponified, nor exists as an acid, nor even as free fat. The existence of milky serum in the blood has been noticed by Marcet in diabetes, by Trail in hepatitis, and by Christison in dropsy. The subject of the case which furnished the following observations was a robust, though not very corpulent, middle-aged man, who was admitted into the hospital for an attack of peritonitis. He was bled by venesection to about five ounces. The blood, when drawn, was of a tolerably bright-red colour, and separated perfectly into clot and serum. No inflammatory crust formed on the coagulum, which was of its ordinary colour; yet, on the surface of it, there appeared several roundish depressions, about the size of peas, which seemed as though they were caused by the separation of fat from the clot. When the milky serum was decanted off, these little hollows remained filled with a portion of it, and gave to the whole clot a very singular appearance. The clot offered nothing peculiar when examined beneath the microscope. The serum was quite as white and opaque as milk, and remained so, after standing for a considerable time. It deposited nothing beyond a few blood-corpuscles. Its reaction was alkaline; specific gravity 1024·35. Examined beneath the microscope, the objects seen in it were: (*a*) a few groups of round transparent annular-looking globules, smaller than blood-corpuscles, yet quite different from ordinary fat-drops; (*b*), globules of the same kind, but larger, and occurring both singly and in pairs; (*c*), a few floating blood-corpuscles; (*d*), a fine granular matter; and (*e*), a very few large and opaque drops of fat. When a portion of serum was dried on the glass, and then redissolved in water, the annular-looking globules reappeared in still larger quantity and distinctness; the fat-globules also reappeared, but not the granular matter. When the serum was treated with ammonia, the globules arranged themselves in larger-sized groups, whilst the fluid in which they floated still remained turbid. Ammonia, therefore, had no saponifying effect. On the addition of acetic acid to the serum, its turbidity disappeared, the globules became clearer, and, on the addition of ammonia to them now, they became saponified. The application of heat caused the globules to become larger and less round. It appears, therefore, from the above results, that the annular-looking globules consisted of a kind of emulsion, composed of albumen and fat: and this view is confirmed by the subsequent chemical analysis, which shewed the existence of an enormous quantity of fat, together with a much larger amount of albumen than usual. To the presence of these opaque globules composing the emulsion was the milky appearance of the serum therefore entirely due. 1000 parts of the serum consisted of 829·515 parts of water, and 170·485 of solid constituents, of which latter no less than 50·473 parts were fat (the average quantity of fat, in 1000 parts of healthy blood, seldom exceeding 2·5); of the remaining solid constituents of the serum, albumen formed 108·791 parts, extractive matters and salts 11·221. The fat was obtained by repeated boilings in ether. It was perfectly saponifiable, and contained not a trace of cholesterine. There was about double the ordinary quantity of fibrine in the blood, whilst the corpuscles were considerably diminished in quantity. At a subsequent period, another venesection was performed, when the blood was found to have approached nearer to its ordinary condition.—*Heller's Archiv.*

ANALYSIS OF THE URINE IN LAND-SCURVY.

BY DR. HELLER.

Two cases of scurvy are mentioned by Heller, in which he examined the urine. The subject of the first was a girl, 19 years of age, who had previously enjoyed moderate health, and had a tolerably healthy aspect. The spots were scattered over her whole body, yet were not particularly large. The disease lasted for a considerable time, yet eventually quite disappeared. The urine was of an intense yellowish-brown colour, somewhat turbid, and deposited clouds and flocculi of mucus. When first voided, its reaction was faintly acid, and its odour not unnatural; but it speedily became alkaline, and then evolved a highly ammoniacal odour. This condition was observed so long as the disease lasted. Specific gravity 1021. On the addition of nitric acid, a precipitate of uric acid could at any time be procured, yet never of albumen; even by boiling and the addition of acetic acid, no turbidity was ever induced. 1000 parts of the urine consisted of 949·28 parts of water, and 50·72 of solid constituents. Of the solid matters, there were—

Urea	16·21
Uric acid	1·27
Extractive matter, with much hydrochlorate of ammonia	23·44
Fixed salts	9.80

The fixed salts consisted almost entirely of earthy phosphates and sulphate of potash, a mere trace of chloride of sodium bein present, laces they had a slate-grey colour, and s shiny. At a point situated about the dle of the small intestines were found apertures through the coats of the gut; e openings were about an inch and a half rt from each other; the upper one had form and size of a white bean; the lower was round, with a diameter of about two s. The margins of both openings were ooth and sharp. The portions of intes- e immediately surrounding the aperture e not at all altered in consistence; no ckening or softening. The mucous surface the rest of the intestinal canal presented hing abnormal Nothing remarkable s observed in the other parts of the abdo- n.—*Casper's Wochenschrift*, 1846.

SPECIAL PATHOLOGY.

CASE OF RE-VACCINATION FOLLOWED BY UNTOWARD SYMPTOMS. BY HENRY KENNEDY, M.B., DUBLIN.

the present period, when not only the blic, but even the profession, are in some gree of doubt as to how far re-vaccination uld be adopted generally, the following e may not be considered void of interest. will show that an operation, trifling in elf, is capable of being followed by symp- ns of an alarming character; and that refore it ought not to be indiscriminately pted, or spoken of as entirely free from k. A lady between 20 and 30 years of e, to all appearance in very good health, s vaccinated on Friday, the 23d of January, this year. The operation was performed the usual way on the arm, close to a well- rked cicatrix of a previous vaccination. e lymph had been obtained about half an ur previously from my friend Dr. Jonathan bbatt.

On Monday (third day) there was some ght evidence of the vaccine having taken; e arm, round the vaccinated part, presented trifling degree of redness; there was a eling of stiffness, and some pain in the illa.

Fourth day.—The patient came down to eakfast, but could not eat. She was oking ill, and described herself as feeling ry uncomfortable. The arm had scarcely tered from the previous day. About noon e was seized with a well-marked rigor, ring which her teeth chattered. This was on followed by a severe pain in the back, hich seemed to affect the breathing a good al, for the respiration became very short, d the expiration, more particularly, seemed be a work of considerable labour. With is there shortly came on the most dis- essing restlessness; every posture being ied with the hope of affording relief. She as directed some mild *aperient medicine,* d *to bathe her feet at bed-time.*

Fifth day.—Passed a tolerable night; sleep somewhat broken. Some slight increase of redness round the vaccinated part, and also an appearance of vesicles forming. No symptom whatever of fever; but there was a sense of sinking, particularly if any attempt was made to move. The pulse indicated this state, for it was feeble, though in frequency not at all above the natural standard. She was ordered a little wine and water, with small doses of sulphate of quinine.

Sixth day.—Had a good night, and feels stronger to-day; pulse a shade stronger; no fever; some appetite. The arm has advanced still more, there being now distinct vesicles, with a slight surrounding redness. The treatment of yesterday was continued.

Seventh day.—Still more improved; and feels more herself than she has done for a few days past. Ate with a relish, and lay on the sofa in the evening. The arm now presented exactly the appearance that it does when vaccination takes its regular course.

Eighth day.—Patient did not rest so well last night, though unable to state what disturbed her. On awaking this morning, it was found that a bright red rash covered both arms from the shoulders downwards; it existed elsewhere in patches, chiefly on the lower limbs, about the knees. In its character it was very like the rash of scarlatina; there was, however, no sore throat or symptom of fever. The tongue was clean. the pulse 78, and of moderate strength, The vesicles were fuller than on the previous day, but the surrounding redness was now hidden by the general rash over the arms. In the course of five or six hours the rash had disappeared, so much so that not a trace of it was to be seen.

Ninth day.—Passed a restless night. Complains now of pains in several joints—as the knees, shoulders, and wrists; which appear slightly swelled. Spots of redness, the size of a sixpence, appear at times on the arms, hands, and face; but they are remarkably flitting, being visible one moment and gone the next. On looking at the arm this morning, the fluid in the vesicles was found to have become quite dark, in fact like blood effused into the part. Besides the pains in the joints, the patient complained of a sense of extraordinary weakness, accompanied by sickness of the stomach: some tea taken early had been at once thrown off. As the day passed on, these two symptoms became very urgent; several fits of weakness of an alarming kind took place, during which the pulse at the wrist was imperceptible, and the patient's face became deadly pale. With this there was constant nausea, which was much increased when even a mouthful of any fluid was taken, or when any attempt was made to move in the bed. Towards evening the patient vomited several times what had all the characteristics of the "black vomit." Yet, with this state, there were, except thirst, no symptoms of fever. The tongue was clean; the pulse did not reach 80, but was exceedingly feeble: the skin was cool. At this period of the case I had the valuable assistance of Dr. George Kennedy.

Tenth day.—Got no sleep through the night, from the violence of the pains, which are now chiefly confined to both arms, reaching from the shoulders to the fingers, and rendering the patient quite unable to move them. Spots of redness still visible, though flitting; and, in addition, there are large and well-marked *wheals* over several parts of the surface. The vaccinated part has this day formed a complete slough. Stomach sickness still most urgent. Several fits of the alarming kind of weakness occurred again this day, nor could the patient be moved without the risk of bringing them on. Still there was no fever, except the thirst can be thought symptomatic of it. The treatment adopted consisted in giving wine, in very small quantities at a time, alternately with some saturated ammonia mixture. An anodyne was likewise directed at bed-time. A poultice was applied to the arm.

Eleventh day.—Got little, if any, rest at night, though free from pain for about two hours. This morning the pains in the arms, and also in the small of the back, are much complained of. The feeling of nausea continues; but the weak fits have not been so frequent as during the last few days. Some appearance of fur on the tongue was observed this day for the first time. Pulse 78: can be counted at the wrist. In addition to the treatment of yesterday, cold chicken broth was directed, a table-spoonful at a time; and the anodyne at bed-time.

Twelfth day.—Was quiet in the earlier part of the night, but did not sleep. The pains in the arms have diminished in intensity, but seem to have centred themselves in the back, where the patient complains of severe racking pain. The slightest movement increases it much, nor can the patient move herself at all. Tongue more furred than before; it is indented by the teeth; and the breath is unusually heavy. The pulse has risen a few beats, being now nearly 90. The sickness of stomach and tendency to fainting are somewhat better to-day. The vaccinated part now presents exactly the appearance a caustic issue would, which had been poulticed a similar length of time. The back was directed to be rubbed with an anodyne liniment.

Thirteenth day.—Got no sleep, from the severity of the pain, which is now her chief complaint. Happening this day to take more fluid at once than she had been accustomed to do, it was immediately thrown up. Tongue now whitish; pulse 90, a shade stronger. Some spots of eruption are still to be seen at times. Slough beginning to separate. No weak fits for the last twenty-four hours.

Fourteenth day.—Tongue more furred, and indented by the teeth; pulse 96, fuller; skin hotter more fever in every respect. Got great relief from stuping, but pain in the back is still her chief complaint. Some mild aperient medicine was directed. It caused three dejections, of a very black and unhealthy appearance. In the evening of that day the pulse was 120.

Fifteenth day.—Passed a better night; has no feeling of nausea; tongue deeply furred, and indented; pulse 104, but stronger. Pain of back lessened; but it has been succeeded by one, referred by the patient to the region of the stomach, which causes great distress. It seems to be connected with the diaphragm, for it has rendered the breathing very short, and is described as stopping any fluid getting into the stomach. Slough separating. The stuping was directed to the seat of pain, and a cold infusion of bark substituted for the ammonia mixture.

Sixteenth day.—Got a little sleep. The chief distress is referred to the region of the stomach. Other symptoms as yesterday.

Seventeenth day.—Passed a tolerable night, but was kept awake part of it by severe shooting pain down the left arm: not the vaccinated one. The breathing somewhat easier this day, as also the pain in the region of the stomach. Tongue beginning to clean at the edges; pulse 100, and strong. Further details of this case need not be given: the patient suffered for three or four nights subsequently, from severe pains down both arms, for which morphia had still to be given, and with good effect. The symptoms of fever gradually subsided; the pains lessened; the slough came away; and the patient is now (more than two months having elapsed) slowly convalescing. Five or six days after the patient was able to leave her bed, there was a threatening of phlebitis in one of the lower limbs; fortunately it did not go farther than a mere threatening; the limb, however, is even now weaker than its fellow.

In the course of his reading or in conversation with friends, the author has not known of any similar case. It is not uncommon for vaccination to be followed by several forms of eruption—such as varicella, crusta lactea, and the rash known as "the gum." Erysipelas, too, and glandular enlargements, are not of unfrequent occurrence. One fatal case is recorded in the Report of the Cow-pox Institution for the past year, in which death took place from diffuse inflammation. Dr. Kennedy also refers to an instance in which melœna followed vaccination in a child, three years old, the skin surrounding the vaccinated parts being densely covered with spots of purpura. Two cases are detailed by Mr. Osbrey, in a former number of the Dublin Journal, where large sloughs formed in two children after vaccination, and were attended by severe constitutional symptoms. In adults, likewise, Dr. Kennedy has known a very troublesome crop of boils follow re-vaccination. Still, none of these cases are at all similar to the one which has been detailed.—*Abridged from the Dublin Qurterly Journal of Medical Science.*

THE INFECTIOUS NATURE OF PESTILENTIAL CHOLERA.

In the last part of the Dictionary of Practical Medicine (Part 10), Dr. Copland discusses at considerable length this important question. The numerous facts which he adduces in favour of the infectious propagation of pestilential cholera, are of a character that, if admitted, there is no escaping from the inference that the disease is capable of being diffused by infection. A common opinion among those who have had an opportunity of seeing this disease in India, is that it is *not infectious;* but Dr. Copland shows, and we think most successfully, that the facts accumulated by many of these gentlemen, in their official reports, are decidedly adverse to the inference which they have drawn. To observe a fact is one thing; to reason correctly from a series of facts is another! That a man may be well qualified as an observer, and quite incompetent as a reasoner, is we think incontestibly proved by several striking instances quoted by Dr. Copland.

We must refer to the Part itself for the accumulation of proofs regarding the infection of the cholera, both in Asia and Europe; but we here reprint, as not uninteresting at the present time, a summary of the conclusions at which Dr. Copland has arrived.

"A great number of the medical men called upon to treat this pestilence have imputed it chiefly to atmospheric causes, denying altogether the influence of infection; and the chief arguments which they advance, in order to show the absence of this property, have been and are about to be referred to. I verily believe, nevertheless, that this malady is infectious in a similar manner to measles and scarlet or typhus fever; that is, not by contact, but from the inhalation into the lungs, along with the air, of the morbid effluvium given out from the body or bodies of the affected. We know that the mere contact of persons suffering from the diseases just now mentioned, will not communicate them even to the predisposed; whilst the presence in the air *which is breathed, of a* scanty portion of the effluvium given off during their progress from the affected, will often produce them: and such, I am convinced, is the case with the pestilential cholera. We further know, that it is not easy to communicate these acknowledgedly infectious diseases by inoculation, when access of the morbid effluvium to the lungs is prevented. It, therefore, can be no matter of surprise to learn that M. Foy, and others of the young physicians who visited Warsaw, failed to propagate the malady by inoculation, or by tasting the matters vomited by the affected; even although the tasting matters vomited, under any circumstances, might well have turned the stomachs of many. Indeed, though cautiously convinced of the existence of the infectious nature of the pestilential cholera, I would have inferred that inoculation, or the introduction of the morbid secretions into the stomachs of healthy persons. even were they predisposed to an attack of the malady, would have failed, in accordance with the laws which infectious diseases observe, to communicate it, provided the effluvium proceeding from the bodies of the affected be prevented from passing into the lungs.

Arguments of those who contend that the disease is not infectious, further noticed.—I have adduced sufficient evidence of the infectious nature of this pestilence, and have stated, under the head of concurrent causes, those to which solely the anti-infectionists impute the disease. I have now to notice, more particularly than I have yet done, certain arguments on which they rely in favour of their doctrine; and, first, they contend that, having had sufficient and admitted proof that cholera has not hitherto been an infectious malady, either as occurring in warm or temperate climates, wherefore should it change its nature, and become infectious at the present time? The ready answer to this is, that it is granted that the common cholera, whether that connected with a vitiated state of the biliary secretions, or that more severe form of the disease most frequently met with in warm countries, and denominated spasmodic cholera, or *mort de chien*, is not infectious; but that this can be no reason why this pestilence. which is distinct from cholera, occurring from other causes and under other circumstances, possessing also very different characters, amongst which those of cholera are merely a part, and the least important part, should present this very important feature.

Secondly, they contend that, if this malady were infectious, a greater number of those who come near the affected would be attacked; and because, under circumstances already alluded to, so many do escape, that therefore the disease is not infectious. This is the chief argument on which Mr. Searle, referring to what took place in his own hospital at Warsaw, relies in support of his opinions as to the non-infectious nature of the disease. But as respects the escape of a large proportion of those who are exposed to the infection, this pestilence resembles all other known infectious diseases, not excepting even the most virulent.

Much stress also has been laid upon the fact of the disease not having been communicated by inoculation, and by testing the ejections; but this proves nothing, and is merely an illustration of what ought to be known to every medical man—that diseases which do not generate a specific virus cannot be easily propagated in this way. Who, I would ask, would expect to communicate measles, scarlet fever, or typhus fever, in this way? Who would expect to be affected by even a concentrated morbid virus on receiving it into the stomach? It is well known that the matter of small-pox and the poison of serpents may be thus applied without effect. That so many, or that all even, of the attendants in an hospital should escape, is only what most medical men of any considerable range of observation would expect, reasoning from their experience; this point, however, has already been disposed of. But the facts are, even on this point, as respects this pestilence, opposed to the doctrine of the non-infectionists; for it has been proved on numerous occasions, several of which have been noticed when demonstrating, by direct proofs, the infectious nature of the disease, that a very large proportion of the medical men and hospital attendants were attacked, notwithstanding the absence of all dread with which medical men and their attendants view disease, and their habitual exposure to animal and other insalubrious effluvia.

Thirdly, the non-infectionists argue, that numerous instances of the true pestilential cholera have occurred, which could not be traced to exposure to communication direct or indirect with those previously affected. This may be the case in a few instances; but how difficult it is to prove mediate infection, or that which takes place through the medium of fomites; and it may be asked, on how many occasions are persons liable to be affected by an infectious principle, without being able to account for the manner in which it took place, or to refer to the individuals whence it emanated, or to the media through which it was conveyed? We know that infectious diseases may occur almost immediately after the impression of the exciting cause, or not until after many days, or even weeks, according to the state of predisposition in relation to the intensity of the cause, during which interval certain latent or almost imperceptible changes are going on in the frame; therefore, during so indefinite a period of interval between exposure to the cause and the development of disease, how can all those attacked refer to the particular occasion on which they were exposed to infection?

Fourthly, the anti-infectionists refer to the occurrence of epizootics, in proof of a noxious emanation from the earth, which, floating in the air, affects both man and beast, and occasions this pestilence. I grant that emanations may, and sometimes do, arise from the soil, and affect man as well as the lower animals; and that, when this phenomenon takes place, it may be a concurrent cause of the pestilence, so far as to increase the predisposition to infection, and the fatal tendency of the disease. But, from a careful review of the occasion on which epizootics have been observed contemporaneously with the prevalence of this pestilence, I can state that they have been few, and merely coincidences, which by no means affect the question at issue. It should be kept in recollection, that several of the seasons preceding and during the prevalence of pestilential cholera have been unusually wet, and that increased mortality amongst the lower animals is often observed at such times. Many even of the instances of such coincidences on record are so vague, and so deficient in accuracy of details and dates, as to deprive them altogether of importance in the disscussion of the subject. Besides, during the very long prevalence of this malady over the whole globe, it would have indeed been wonderful, if the coincidence of epizootics with it had not been observed.

Fifthly, another circumstance made use of by the non-infectionists, is that of so many who have observed and treated the disease having espoused their side of the question. To this I may reply, that a very large number of those who have enjoyed this advantage have not had, even in India, as may be ascertained by referring to the reports of the Medical Boards, and to the documents at the India House, that extensive experience which we in this country suppose. It should be recollected, that a large proportion both of natives and native troops were treated by their native doctors. Besides, are we to expect those comprehensive views of the history and modes of propagation of a disease from those who have seen but a little, and described only what they have seen; or from those who dispassionately investigate the origin, the causes, the phenomena, and the relation of all that has been observed and recorded, and cautiously weigh the evidence on either side of the disputed topic connected with it? The captain of a company, or even a colonel, performs an important part, individually, in an army during a general ngagement; but he can know little, personally, of the disposition, changes, and volutions of all its parts, and of the plan f strategy, according to which it is first cted, or was led to change its operations, in rder to meet or counteract those of its pponent. Like the commander-in-chief f the whole army, we, who collect, compile, rrange, and digest facts, on both the one de and the other of a disputed subject,—ho observe closely what has occurred with- the sphere of our own experience,—who ompare, weigh, and meditate upon the hole evidence, personal as well as testi- onial, with our minds uninfluenced by rematurely conceived ideas, are the best uited to investigate, and to conclude re- pecting them. Placed, by the number of ccumulated facts, and by minds accustomed view and to investigate the difficult perations of nature, on the elevated table- nd of human science, we may be admitted be more able to take in a comprehensive ew of the causes and nature of disease, and come to accurate conclusions respecting , than many of those who, as observation s shown, have drawn hasty inferences from few and very imperfectly investigated currences.

Sixthly, the non-infectionists also argue, at if the disease had been infectious, its opagation would have been prevented by e measures resorted to. To this argument reply, that the disease, during its prevalence the East, was never expected to be con- ned by sanatory measures; that it was not til it reached Astrachan that any such easures were attempted, and then only perfectly; and yet these succeeded for ght years in preventing its entrance into at place; and that, where rigorous quaran- e has been adopted, the measure has suc- eded; several instances of the success of ch measures having already been adduced. The non-infectionists further state, that veral continental states and authorities, nvinced of the inutility of quarantine, have linquished it. Granting this to be the fact, merely shows, what any thinking person ust admit, the impossibility of preventing e introduction of the disease into a populous wn, situate in the vicinity of others, and of thickly inhabited country, between which ere must necessarily still be, even under e most strict quarantine, a constant inter- urse of some kind or other, either by land water, and perhaps by both. There can no doubt, if the testimony of several well- formed persons, cognizant of the facts, are be relied upon, that the distemper was troduced at several sea-ports of this country the bed and body-clothes of those who ed on board mercantile ships, that had been eserved and given up to the relatives of e deceased. But a strict quarantine and purification of these effects only could have prevented this mode of communicating the distemper; and in no instance were these observed. Indeed, many ships arrived, during the latter part of 1831, in British ports, from infected places, having lost individuals from among their crews on the voyage home, and the fact was often either concealed or not attended to, the infection either proceeding further, or not, as circumstances concurred to favour it.

But let me turn for a moment to the causes which the non-infectionists substitute for an infectious principle. Some argue in favour of a certain distemperature, epidemic condition, or altered state of the air, being the cause of the disease. Now these are mere suppositions. But grant them to exist, how would they explain the progress and propagation of the pestilence? The air is a very mobile fluid, sweeping along frequently at the rate of seventeen and eighteen miles an hour, and being constantly renewed, both in a horizontal and in a vertical direction, unless in situations where it can be confined. But the disease has not been propagated in the course of winds, or with the rapidity which such a source would suggest: *it has advanced slowly, and at the rate at which human intercourse takes place, in the lines or channels of such intercourse, and in the quarters where intercourse with previously infected parts has occurred.* It has usually spread in a town, visited prisons or sequestered places the last, but affected them severely when introduced; and it has entirely avoided those who placed themselves altogether apart from the rest of the community.

If the constitution of the air were the cause, how came isolated places, in the middle of infected towns, or in the track of the progress of the disease, to escape? How could the disease be barricadoed, as it was in some towns in Russia, and shut out from certain districts and streets? How could it spread and travel along one side of a river, in the line of public intercourse, and never appear on the opposite side, or, if it did appear, wherefore did it, either first or merely, at the point where communication with the opposite banks takes place? When introduced into a country, wherefore should it break out first *in sea-ports having intercourse with previously infected places*, or in towns having inland communication with parts thus circumstanced? If the air were the source, how was its noxious property retained after passing hundreds, or even thousands of miles, as in the case of the appearance of the disease in the Isle of France; or wherefore did it, after this passage, respect the adjoining islands? *How came the disease never to appear in any place without previous intercourse with a previously infected part, if it arose from* *a generally diffused state of the atmosphere?*

Others, again, impute the pestilence to the exhalation from the bowels of the earth of some peculiar miasm. But the above arguments are equally weighty when directed against this supposition: for, independently of such exhalation being a mere assumption, as well as the foregoing, and putting out of the question the fact, that not a vestige of evidence has ever been adduced of any peculiar change of the atmosphere from its usual condition, or of any miasm, exhaled from the interior parts of the earth, having been observed simultaneously with the appearance of the malady, these causes, even if they did exist, could not account for the specific and uniform characters which it has always presented, in every situation, temperature, and elevation above the level of the sea, in all latitudes and longitudes, and from its commencement constantly up to the present time. A distemperature of the air, whether from foreign gases, electrical states, or whatever other cause, surely could not for such a period, or under such a variety of circumstances, be so uniform and specific. Exhalations from the interior of the globe, whether proceeding from a great internal fire, from the action of circumambient agency, solar or lunar, or both, or from the electrical changes taking place in the more interior masses and constituents of our planet, surely could not, in all places, at all periods of this epoch, at all elevations, and under every combination of circumstances, be so uniform their effects, so specific in their action, as the character of this pestilence shows its exciting cause to be.

If a noxious exhalation, proceeding from the more interior parts of the globe, caused the disease, it must on some occasions have risen through the depth of the ocean to have affected the crews of ships. Could this have taken place without it being changed by the medium through which it passed?

Where we find a distinct agency—a specific effluvium, exhaled from the bodies of the affected, of which we have certain proofs, not merely as respects the manner of its operation, but also as regards its impression on several of our senses—wherefore should we have recourse to supposititious essences and to vain imaginings, to account for the propagation of the disease?

It may be supposed that more space has been devoted to this part of the subject than it deserves. It is, however, of the most transcendant importance; for upon accurate views respecting it altogether depends the success of measures to prevent the extension of the pestilence, and even to remedy it where preventing measures have failed. Besides, as this pestilence is placed in the same *category with* true yellow fever and the plague, both by those who argue for and by those who argue against infection, the evidence for or against this property in respect of it applies also to the others.

Having devoted much attention to the phenomena of this pestilence, and to the circumstances characterising the dissemination of it, and having had extensive experience in it during its prevalence in this country[*], I proceed very succinctly to state the conclusions at which I arrived as to its causation and propagation.

The distemper was caused by infection, which was traced in many cases—in most of those which I saw in private practice: it was manifestly infectious according to the definition I have given of *Infection*, in the article devoted to the consideration of this topic.

It was not caused or propagated by immediate or mediate contact—by a consistent, manifest, or palpable virus or matter; but by an effluvium, or miasm, which, emanating from the body of the affected, and contaminating the air more immediately surrounding the affected person, infected the healthy who inspired the air thus contaminated, especially when predisposed in the manner above shown.

This morbid effluvium or seminium of the distemper—this animal poison emanating from the infected—was often made manifest to the senses of smell and even of taste; it attached itself to the body and bed-clothes; remained so attached for lengthened periods, if these clothes were shut up in confined places; and reproduced the disease when the air respired by predisposed persons was contaminated or infected by the clothes imbued by the effluvium or poison[*].

---

[*] On the introduction of the pestilence into this country, I was desirous of observing it in the cholera hospitals within my reach, especially in those first established; and my friends at the Privy Council Office furnished me with every facility in accomplishing my intention. I saw also many cases in private practice, both in my own vicinity and in various parts of the metropolis and suburbs.

[†] The following remarkable instance of this mode of propagation occurred to Dr. Copland:—"Soon after the opening of the first Cholera Hospital in the vicinity of London, near Bermondsey, I passed a considerable time with the patients first admitted, and was present during the inspection of two fatal cases. I drove thence in an open carriage and saw two relatives, residing in an airy situation in Pentonville, a distance of from three to four miles; and yet the persons whom I visited, after so long a drive in the open air, complained to me instantly upon my entering their apartment of the offensive odour which proceeded from my clothes. I was cautious in not mentioning the source of this odour, and no suspicion was entertained by them of the cause. But the following day I was called to them, and found them both in an early stage of the distemper, from which they ultimately recovered with difficulty. Precautions were taken against the further extension of the malady in this house, and no case occurred in the vicinity until some months afterwards. Other proofs of infection occurred to my observation; but it is unnecessary to advert to them at this place."

The disease was thus propagated in numerus cases; and, as I was convinced, in my wn person, even by the clothes of the hysician, without himself becoming affected n infected or contaminated air—infected the way just shown—caused an attack, ithout immediate or mediate contact, which as entirely innocuous, provided the air conaminated by the affected person was not inpired.

Placing the hand upon any part of the urface of a person in the cold or blue stage f the distemper was often followed by a peuliarly unpleasant or tingling sensation in he course of the nerves of a healthy person, ut this would not occasion infection, if reathing the contaminated air surrounding he affected was avoided.

When the poisoned air was breathed y a healthy person for the first time—espeially the unpleasant air in the wards of a holera hospital, or that surrounding the ead body, or that contaminated by the vacuations, a morbid impression was often elt and referred to the chest and epigastrium, iving rise to frequent forcible inspirations r expansions of the chest. This impression nd its immediate consequences generally isappeared after a recourse to stimuli, or all living; but were followed by some grade r other of the distemper, if other depressing gents, as fear, &c., or high predisposition, avoured their development.

On occasions of subsequent exposure to he efficient cause of the malady—of breathg the infected air—this morbid impression as somewhat less manifest; and each sucessive exposure was followed by less evident ffects, unless the morbid effluvium was more oncentrated in the respired air.

The operation of the morbid effluvium or nimal poison was violent in proportion to he concentration of it in the air respired, nd to the weakness of the person inspiring t, and to the grade of predisposition.

There is no evidence to account for the eneration of the choleric poison in the first nstance, and there is as little of its reproducion *de novo* on subsequent occasions. It is lso impossible to form a correct idea of the eriod during which the infectious miasm r seminium may be retained by clothes losely shut up from the air, or by the dead nd buried body, and be still capable of inecting the healthy."

SURGERY.

UCCESSFUL APPLICATION OF THE MATICO LEAF IN A CASE OF OBSTINATE HÆMORRHAGE. BY JOHN HAMILTON, ESQ.

HE subject of this case, a little boy between our and five years old, was brought to the uthor about a year and a half ago, in consequence of a bleeding from the tongue, which had continued for two days in spite of the application of lunar caustic and pressure, by the gentleman to whom the child had first been brought. It appeared that he had fallen down, and bit his tongue at the point, where a small and constant oozing of thin blood now took place from a little irregular opening. The child was quite blanched, and beginning to get weak, and its mother was in the greatest state of alarm, and not without reason, as his brother had bled to death from a slight injury to the nose, in spite of the best medical assistance; and this child had formerly nearly bled to death from some slight wound about the mouth. In such a soft, unresisting, moveable organ as the tongue, subjected to constant heat, moisture, and suction, the arrest of hæmorrhage offered no small difficulties. The author first tried the actual cautery. This only caused a momentary stoppage. He then passed a small sewing needle with a double ligature behind the spot, and tied on each side of it. This was successful for a time, but in an hour or two the child was brought back, bleeding as fast as ever. The child was then persuaded to keep a piece of alum in its mouth, continually sucking it, and this, after an hour or two, effectually arrested the hæmorrhage. The child was a long time regaining his strength, or any approach to a natural colour. The child was, a second time, brought to the author, having again bit his tongue three days previously, since when a continual oozing of blood had gone on in spite of the application of the nitrate of silver, and of his sucking alum as he had formerly done with such success. He was, as on the former occasion, perfectly blanched, and the blood which oozed out from a raised point at the tip of the tongue, was thin and watery. The author tried pressure with his fingers, with a small piece of fuzzy lint; but the blood soon soaked through the lint. He then took a small piece of the matico leaf, and applied the lower surface to the bleeding point, and kept it there as long as the child would keep the tongue quiet, which was not half a minute. He then found that the blood had ceased to flow, and that the small spangle of matico leaf adhered to the tongue. The nurse was desired to re-apply a piece of the same size whenever this fell off. On the next day the child was well. The first piece of matico had fallen off in less than half an hour; but there was then scarcely any appearance of bleeding: the nurse applied a second piece, and the hæmorrhage was completely arrested.—*Dublin Hospital Gazette.*

PATHOLOGY.

RUPTURE (?) OF THE UTERUS, FOLLOWED BY UTERO-INTESTINAL FISTULA. BY DR. WILLIAM N. MORGAN.

A COLOURED woman, who had five children, was seized on the 20th of December, 1841, with severe labour pains, and the membranes were very easily ruptured. She remained in this situation, with excruciating pains for about twenty-six hours, attended by a midwife. A physician was then called in, who found a shoulder presentation, the arm having descended, and the child low down in the pelvis, firmly grasped by the uterus, and the pains still very severe. He bled her freely and gave an anodyne, after which the pains diminished, and he was able to turn and deliver by the feet, though with much difficulty.

After her delivery she seemed as well as usual, except that she was troubled with costiveness, which had existed for some seven or eight days previous to parturition.

Thirty-six hours after delivery Dr. M. was called to see her, and found her labouring under obstinate constipation of the bowels, though she had taken nine or ten ounces of castor oil, and stimulating enemas had been freely used. With this, great soreness of the abdomen existed, accompanied by extreme distension from the lower portion of the sternum to the pubis; her tongue was furred; pulse 120 in a minute. The purgatives employed having accomplished nothing, Dr. M. ordered ol. ricini ʒij., ol. tiglii, gutt. ii., to be administered forthwith, and a blister plaster to be applied to the abdomen.

By persevering in the use of the above cathartics, calomel, gamboge, &c., aided by enemas, her bowels were evacuated in four days, after having been inactive for ten or twelve. From this period, there was an abatement of all the alarming symptoms, attended with an evident improvement of the system in general, though the uterus remained above its natural situation, much hardened, rather enlarged, and extremely painful on pressure. She continued to improve slowly for about ten days. At the expiration of this time, she was suddenly and violently attacked with uterine hæmorrhage, attended with great relaxation of the womb, and prostration of the vital energies. The hæmorrhage yielded to the use of acetate of lead, opium, and ipecacuanha, assisted by frictions over the abdomen, and also by astringent injections *per vaginam*.

So soon as she recovered from the prostrating effects of hæmorrhage, she again began to improve as before, with regular discharges from her bowels, and a slight inclination to diarrhœa, which, however, was easily controlled by the use of calomel and opium. She remained in this state for seven days after the flooding ceased, making about eighteen from the period of her confinement, when Dr. M. was greatly surprised to learn that she was discharging fæcal matter through the vagina, and none in the usual way. He immediately proceeded to an examination, expecting to find a communication between the rectum and vagina; but finding no rupture there, examined further. About the left fundus of the uterus the patient had complained much of soreness, and on pushing the fingers into that region a large collection of fæcal matter was discovered. A syringe being introduced, several ounces of fluid fæces were removed. She continued to void her fæces involuntarily by the vagina for thirty days, during which time she experienced rapid emaciation. About the last of January a favourable change took place. The evacuation of fæcal matter through the uterus ceased, and she began gradually to improve in health and strength, but suffering occasionally from pain about the point of the rupture, and being troubled with œdema of the face, feet, and hands. It is now about three years since this case occurred. The patient has enjoyed tolerable health since the time above mentioned, with the exception of occasional colic pains in the region of the colon, irregular menstruation, and slight diarrhœa. At times she complains of soreness to the left of the umbilicus, at the point where the rupture occurred. She has not conceived, although she bred rapidly before this accident occurred. Since her recovery from this state of things, when not under the influence of cathartics, her fæces have been of the natural shape and colour; the action of the bowels is easily induced, and without more pain than is common under the ordinary operation of cathartics. During the time that her fæces were passing *per vaginam*, the only medicines that were given were tonics, with an occasional dose of morphine.—*American Journal of Medical Sciences.*

[The symptoms detailed in the above case appear to us to have been rather those of the formation of an ulcerated communication between the fundus of the uterus and the large intestine, than of the rupture of the former organ occurring during parturition. There seem to have been none of the characteristic symptoms of so grave an injury at the time of delivery. The constipation was in all probability attendant upon a process of limited peritoneal inflammation, by which adhesion was taking place between the intestine and the uterus, and it was very fortunate that the active purgative plan adopted did not fatally interrupt this process. The commencement of sloughing or ulceration in the uterine substance was probably the cause of the hæmorrhage on the tenth day.—ED. GAZ].

N OF CROUP MEMBRANE.

ntions having examined be-
scope a portion of the false
g the larynx and trachea, of
died of croup. The mem-
t half a line in thickness, and
stence. It was composed
of ordinary pus-globules,
ch were a few inflammation-
me other cells exactly similar
, except in being at least as
eller's Archiv, vol. ii. p. 343.

ATHS IN THE METROPOLIS

k ending Saturday, Sept. 5.

DEATHS.		*Aver. of 5 yrs.*	
Males....	434	Males....	493
Females .	450	Females .	475
	884		968

DIFFERENT DISTRICTS.

;—*Registrars' Districts*, 129.
ion, in 1841, 1,915,104.)

on; Chelsea; St. George,
e; Westminster; St. Martin
St. James .. (Pop. 301,326) 122
arylebone; St. Pancras;
kney ...... (Pop. 366,303) 180
les and St. George; Strand;
kenwell; St. Luke; East
t London; the City of
............(Pop. 374,759) 137
h; Bethnal Green; White-
orge in the East; Stepney;
............Pop. 393,247) 203
viour; St. Olave; Ber-
. George, Southwark;
mbeth; Wandsworth and
mberwell; Rotherhithe;
............(Pop. 479,469) 242
Total 884

USES OF DEATH.

ges of 5 Summers; Col. B. of 5 Years.

		A.	B.
....	884	898	968
ES	881	892	951
pidemic, Endemic, gious) *Diseases* ..		201	188
Diseases, viz.—	209		
cer, &c. of uncer-	87	99	104
Marrow, Nerves, ...	151	155	157
other Organs of n	204	227	294
ood-vessels	20	23	27
iver, and other Digestion	112	87	
e Kidneys, &c. ...	6	6	7
Diseases of the, ...	12	9	10
Diseases of the nts, &c.	11	6	
Tissue, &c.	2	1	
....	33	52	67
vation, Cold, and nce	34	26	26

The following is a selection of the number of Deaths from the most important special causes:

Small-pox	6	Convulsions	26
Measles	5		
Scarlatina	10	Bronchitis	17
Hooping-cough..	16	Pneumonia......	24
Diarrhœa........	108	Phthisis	137
Cholera..........	11	Dis. of Lungs, &c.	9
Typhus	26		
		Teething........	5
Dropsy..........	11	Dis. Stomach, &c.	16
Sudden deaths ..	3	Dis. of Liver, &c.	17
Hydrocephalus ..	41	Childbirth	5
Apoplexy........	26	Dis. of Uterus, &c.	2
Paralysis........	19		

REMARKS.—The total number of deaths was 14 below the summer and 84 below the annual average. The deaths from zymotic diseases were about the summer average. The mortality from diarrhœa has considerably abated. This disease is still, however, very prevalent and fatal among young children. In the North and South districts, the mortality was above the average. In the others, it was below.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Sept.* 10.—Wm. Forster Fotherby, Sheffield.—Edward Lowe Webb, London.—Wm. Edward Wright.—Gordon Kenmure Hardie.—George Burnside Bryden, Kirkby Stephen.—William Hankes Day, Norwich.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....30·09
„ „ Thermometer[a]............61·6
Self-registering do.[b] ......max.100·5 min. 34°
„ in the Thames water „ 66·2 „ 64·2

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·0: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was nearly 4° above that of the mean temperature of the month (57·8°). The extreme hebdomadal range in the self-registering thermometer was 66°5.

NOTICES TO CORRESPONDENTS.

Received.—Dr. Wardell.—Dr. J. F. Ogilvie.—Mr. R. H. A. Hunter.

MEDICAL SOCIETY of LONDON.—The ordinary Weekly Meetings of this Society will be resumed on Monday, the 28th inst. at 8 o'clock P.M. when a Paper will be read by W. Hughes Willshire, M.D. "On a New Æra in Therapeutical Inquiry."

The subjects for the Fothergillian Gold Medal, offered for competition annually by this Society, are, for March 1847, "The Pathology of Insanity," for March 1848, "On Gout," and that for the additional Fothergillian Medal for the year 1848, is "The Mode in which Therapeutic Agents introduced into the Stomach develop their peculiar effects on the Animal Economy, illustrated by Experiments." The learned of all countries are invited to compete for these Medals.

W. A. HARRISON, } Hon. Secs.
J. F. CLARKE, }

ADVERTISEMENTS.

THE AUTHORISED ENGLISH TRANSLATION.

Just published, Vol. 1, post 8vo. price 12s. cloth,

HUMBOLDT'S COSMOS: Sketch of a Physical Description of the Universe. Translated, with the Author's sanction and co-operation, under the superintendence of Lieut.-Col. EDWARD SABINE, R.A. For. Sec. R.S.

*** The Second Volume is in the press.

London: Longman, Brown, Green, and Longmans; and John Murray, Albemarle Street.

NEW WORK ON CLINICAL SURGERY.

This day is published, in 8vo. 10s. 6d. cloth,

CLINICAL COLLECTIONS and OBSERVATIONS in SURGERY, made during an Attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. ORMEROD, Fellow of the Royal College of Surgeons of England; late House-Surgeon at St. Bartholomew's Hospital.

Longman, Brown, Green, and Longmans.

This day, in post 8vo. 7s. 6d. cloth,

NOTES on the EPIDEMIC CHOLERA. By R. HARTLEY KENNEDY, M.D. late Physician-General, and President of the Medical Board, Bombay.

London: Smith, Elder, and Co., 65, Cornhill.

MEDICAL, LEGAL, and GENERAL MUTUAL LIFE ASSURANCE SOCIETY.—The only Office, founded on principles of Mutual Assurance, in connection with the Medical and Legal Professions.

R. W. MORRIS, Actuary.

Offices—126, Strand.

Just published, 8vo. price 10s. 6d. cloth,

THE NATURE and TREATMENT of GOUT. By W. H. ROBERTSON, M.D.

"We have read this treatise with much interest, and we are sure that every one that opens the volume will allow that it is not only replete with information brought down to the latest period, and of a very practical character, but that it is conveyed in an agreeable and interesting manner. It is difficult to specify any one part of the volume as more deserving attention than another, for all are ably done."

EDIN. MED. AND SURG. JOURN.

London: John Churchill, Princes Street, Soho.

ROBINSON ON THE TEETH.

Just published, with 139 Engravings, price 10s.

THE SURGICAL, MECHANICAL, and MEDICAL TREATMENT of the TEETH; including a complete Treatise on Dental Mechanism. By JAMES ROBINSON, Surgeon-Dentist to the Metropolitan Hospital, &c. &c.

W. Webster, 60, Piccadilly, London; Lindsay and Blakiston, Philadelphia, U.S.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES, offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Saltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton; by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the public against spurious articles.

ROYAL EDINBURGH LUNATIC ASYLUM.—In consequence of the Resignation, on account of ill health, of Dr. Mackinnon, the Resident Physician and Superintendent of this institution, the Managers are desirous of receiving applications for the office from Gentlemen holding a Medical Degree or Diploma, and otherwise qualified.

Candidates must have had experience in the treatment of the Insane; but it is not indispensable that they should be married, the domestic arrangements being under the charge of a Matron. The Salary, &c., will be on a scale equal to that of other similar institutions. There are at present upwards of Four Hundred Patients in the Asylum.

Applications (accompanied by Testimonials, &c.) addressed to John Scott, W.S. Treasurer of the Royal Asylum, 7, North St. Andrew Street, Edinburgh, will be received till Saturday, 10th of October next, soon after which the Managers will proceed to fill up the Vacancy.

Edinburgh, Sept. 7, 1846.

LONDON HOSPITAL MEDICAL and SURGICAL SCHOOL.—The Lectures will commence on Thursday, October 1st, 1846, at half-past 2 P.M. when an Introductory Lecture will be delivered by Mr. Curling.

Medicine—W. J. Little, M.D.
Surgery—Mr. Luke and Mr. Curling.
Descriptive and Surgical Anatomy—Mr. Adams.
General Anatomy and Physiology—W. B. Carpenter, M.D. F.R.S.
Materia Medica—J. Pereira, M.D. F.R.S.
Chemistry—J. Pereira, M.D. and Henry Letheby, M.B.
Midwifery, &c.—F. H. Ramsbotham, M.D.
Forensic Medicine—F. H. Ramsbotham, M.D. and Algernon Frampton, M.D.
Practical Anatomy—Mr. Critchett and Mr. N. Ward.
Dental Surgery—Mr. Craigie.
Botany—

General Fee to the Lectures, £30; Medical Practice, £11. 11s.; Surgical Practice, including Twelve Months' Dressership, £26. 5s.

*** A Library and Cabinet of Materia Medica free to the Pupils.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.

Friday, Sept. 18, 1846.

Lectures.

A COURSE OF LECTURES ON

ELECTRICITY AND MAGNETISM,

Delivered at the Royal Institution,

By Prof. Faraday, D.C.L., F.R.S., &c.

Lecture VIII.

Magnetism.—*The subject continued—slow advance of science—form of a powerful electro-magnet—its power illustrated by experiments—magnetic curves formed in the air—effect upon an iron chain—magnetic bridge of iron—no attraction of lead and some other metals—magnetised paper—new property of magnets—illustrated by bismuth—repulsion of this metal by the poles—magnets attract some bodies, and repel others—phosphorus repelled by the magnetic current—diamagnetism—all bodies attracted or repelled—the latter class most numerous—lists of magnetic and diamagnetic bodies—diamagnetic properties of water—substances, whether liquid, solid, or pulverulent, point axially or equatorially—magnetic and diamagnetic properties of air in different liquids—vegetable substances, if longitudinal, diamagnetic—magnetism of the earth—phenomena of the dipping-needle—source of magnetic attraction near the centre of the earth, not at the poles—relation of diamagnetism to terrestrial magnetism.—Conclusion of the course.*

Since the time that Lord Bacon taught us how to examine nature by experiment, such an immense advance has been made in the investigation of natural philosophy, that we are prepared at the present day to expect a progress onward even from week to week, or at all events from month to month, without any great surprise. But when one considers the general system of nature, which changes not; that all its laws were established from the beginning, although we may discover new facts, and perceive new relations of things, and read laws of nature we call *new*, but which are as *old* as creation; it must occur to the mind as science advances more and more rapidly, because of the light thrown upon it by our predecessors in philosophy, and because of the increase in the number of students, still it increases the difficulty to any one body, or one individual, or one nation now a days, to make any considerable advances. And further, here is this singular point: according to my mode of viewing matters, we are *always* inclined to feel in reality, although we acknowledge the contrary in principle, that we think we know every thing. There is a feeling in the minds of many, that we are already in a position to give an answer to almost every question. There is an irresistible tendency in the minds of many persons to this conclusion.

Nevertheless, we are slowly making progress, and to-day it is my duty to bring before you a step in advance in science; that is, to describe a new condition of our knowledge of matter, a new condition of the force we have called magnetic, and which you have seen exhibited in various forms, by a current, and by independent pieces of ferruginous substances. I shall endeavour to make you acquainted with this first gleam of knowledge, for it is only the crudest notions we can expect at present, since these facts are quite new to us. I shall try to make you acquainted with this first germ of what I believe will be a great branch of knowledge hereafter. It relates to a new kind of knowledge—to our knowledge of the *power of magnetism over matter*, and of the capability of matter exhibiting a force beyond that of gravity, or chemical affinity, or even electric action such as it is known at the present time.

I must ask you first to look at my large magnet, although you have seen it before, inasmuch as the development of this branch of knowledge must depend on the condition or power of the magnets. I will for a few moments hold your attention to this electro-magnet before me, and of which there is the larger part below the table. [The enormous poles only of a horse-shoe electro-magnet were visible on the table.] It is a bar of iron, and there are wires round it, which wires go to a battery. We have here, then, a very powerful electro-magnet, with this beautiful condition, that we can make or unmake it at pleasure,—that having the extremes or poles together, I can vary the form of the poles, and make them come nearer, or go further, by putting on moveable masses of iron of different shapes. I have here an enormous amount of power, but I can create it and destroy it *in an instant*. Two or three experiments will shew it at once, from which you may form a comparative judgment hereafter, either next year or ten years hence, when this science has made still further advances. I give you that kind of action which Volta used when he first discovered the battery. I may not bring my tests [large bars of steel weighing many pounds] in close contact with these poles; if I do, perhaps I shall never get them off again, or at least during the lecture. I must put something between them—a piece of board, for example—which I can easily lift off again. Contact is made, and we have now the magnet

982.—xxxviii. *Sept. 25, 1846.*

in full power; you may see the difficulty of moving the heavy mass of iron away from the poles. I might almost pull the whole table down by the attractive force of the iron beneath influencing the magnet through the thickness of this board. You have seen nothing like this power before. It would suspend many tons weight of iron. It is only by seeing facts of this kind that you become aware of the enormous power I am about to use in the applications I shall make to show his particular kind of phenomenon. I take two bars of iron; on making contact they become one bar. The moment contact is broken it is unmade; and the beautiful condition which we have of making and unmaking, of giving or destroying an extraordinary force, is one essential point in the manifestation of this phenomenon. I should like you to see the condition of the magnetic curves as shewn by means of this arrangement, and which we can soon exhibit by sprinkling a few of these nails on the mill-board. You saw where the two poles were placed; you see how inert the nails are at present. We will make them magnets, and then see how the curves run together. It is almost unmanageable, for as soon as a plate covered with nails approaches the magnet, it attracts them so powerfully as to strip it entirely of its contents. You see here an illustration of the tales in the Arabian Nights' Entertainments. Mark the way in which new powers are given, and bodies of enormous weight are held firmly together. Observe this line of nails actually rising into the air, and tending to make curves such as I shewed you on a former occasion. It is a curious and beautiful thing quietly to look at this action. This is merely incidental; I only shew the point to illustrate the power of the magnet. When contact is made, if I lay a few nails quite at the extremity of the mill-board, they fly instantly to the others in the centre. You see how strong the curves are here, compared with the line of force, by the manner in which they are drawn. The force is still more powerful when I bring the extremities of the poles close together. Here is an iron chain; and that you may have some notion of the manner in which a body is influenced, I will let you see the effect the magnet has on this chain. I have here got something apparently different from what I had before: I have got a body which I can bring into any shape, and which appears to be, while under this magnetic influence, a soft solid substance. I have now formed it into a bridge in the air. The parts cannot separate, because they are connected by links; but they are also kept from separating by the magnetic influence. When contact is broken, it becomes a common chain as it before. In this manner you get a beautiful indication of the strange condition of the space extending between pole and pole, by all the matter brought into it. At present I am giving you common magnetic effects; by and by I will give you others.

It is worth while to show that, as regards *lead*, there is no action of this kind; it makes no difference whether there is a magnet or not. These leaden balls roll about just as before, there is no place of rest, there is nothing determined by the magnet upon the lead under these circumstances. There is an effect which I want to show you, but I will show it by and by with other substances than lead. Still, as regards common action, there is none on these bodies. Here are some iron filings, which are very beautiful and very instructive, because they teach us better what goes through the whole space than does a nail or two. When contact is made you see first that the power affects the edges most; I make the extremities pointed that I may get an increase of power on the points. If I put the whole of the filings down they fall into a mere unarranged mass, taking any shape you please; but when contact is made we can draw them out, and it is beautiful to see the manner in which they hang on each other. Observe the broken lines of force which they represent, and the mode in which you can raise an enormous amount of matter against gravity. Having been formed into a mass, you can make them into a bridge or arch in the air. It is remarkable to see such a space influenced, and the power imparted through the current.

Having given you these illustrations of the power of magnetic matter, I must point out that we are able to get a power from magnetic force which this magnet will not give us. If I remove all these things away for the present, take away all the iron, and, as far as I can, clear the table, you will be able to see that I can get magnetic phenomena from this magnet, which before I could not. I am about to roll up this paper into a cylinder, or hoop, or roll, for the purpose of showing that it is most likely magnetic, for I never yet found a piece of foolscap paper that was not so. I have taken some pains to keep this paper clear from all impurities of a ferruginous kind, and if I make a nice suspension, I shall be able to hang it between the poles of the magnet and to examine its state. I am now drawing your attention to an arrangement that I am able to turn to account in further examination. The one I have here is in the open air, that you may see all things which occur in it; but I shall by and by adopt another plan to show you the particular phenomena. Here is a piece of cocoon silk, and here are some copper wires, all of which are perfectly free

etism. They have been tested
rerful magnet, and unless they
tly free they would not serve my
pose. If I take this paper and
near these poles, using this little
:oon silk for the purpose of sus-
and then ascertain whether it is
r not, perhaps to your surprise,
surprise in the first instance, it
o be considerably magnetic, and
us a piece of iron would do. I
will see that when I shall make
of that which is indifferent and
nywhere, that most likely it will
en the poles. Contact is made,
all see whether it takes up an
n. If it does, and vibrates, it is
It does so, and tends to rest
poles of the magnet. If contact
t will take what direction the
it. When the contact is renewed
ne again magnetic. You see how
btains a new action and goes to
becoming magnetic.
:his arrangement. I have ten or
on threads which are capable of
it or any other weight. They
sion, no twist of themselves, and
ey will hold the weight without
wist or untwist. All I have to
f is to avoid the currents of the
, and then I will give you this
a test of every one that takes
am now about to proceed to an
t in which I shall be able to
hat which is a new characteristic
s of matter. In order to get
:, I have to be exceedingly careful
ngement, and I ask you to be
h small results, small as to the
action, but not small as to prin-
must arrange the apparatus in
ner that I can place substances
se two magnetic poles, and must
h substances as will enable you
. I must so place them as to
ction from the current of air in
o that I may leave no deception
of deception on your minds in
the phenomena that take place.
you to spare me a few moments
ange the apparatus, of the ne-
hich you will have evidence as
This is a glass screen to prevent
a current of wind. If I put a
on this side, and another on that,
ble, without hiding things from
ation, to get a movement visibly
Here are the centres on which I
o make a lever move. This is a
edle point, and here a long lever,
tre of motion shall be that tube.
lace this end free from the action
hilst I make *the centre of motion*
e poles. I want to bring the poles to act on the substance outside. If I allow this short end of the lever to go upon that end, then all will be free to move. I hope this little cylinder of bismuth is sufficient to counterpoise that end, allowing free motion and showing a new action. The very circumstance I have told you, that we are now engaged in examining new phenomena for the first time in public, must be an excuse for the rough arrangement before you, and which is only the temporary one of a first discovery. If I take a screen so as to allow the ends of the lever to be seen, you perceive it is free to move away, and these being moveable poles, I can bring them upon the one side or the other of the bismuth, and so submit it to the power of these poles. You will soon distinguish between the magnetic force and the new power that moves it by every current through that arrangement. You see clearly—for I allow this pole to come on this side the bismuth—that when that end of the needle moves to my left, this piece of bismuth must be repelled by the pole on my left. It is evident, the things being crossed, that if that moves one way this must repel it. The needle is at the axis; I am not touching it, but the moment I bring up this pole of the magnet I send it round. Merely by the repulsion of that pole, making and unmaking the magnet, by acting upon the bismuth I can repel it from the magnet. This is utterly unlike what you saw with the iron. When I drew off the iron cylinder, it went back with great power, I could not pull it from the pole; but here the power of the magnet is to *repel*, not to attract. I am not acting by the north pole of one magnet upon the north pole of another. I am taking a substance in its natural state *not magnetic*, and acting on a pole, and we have found a substance which is *repelled* by the magnet, and not attracted. Up to this time you have known of no substance but what was either *attracted* by the magnet or indifferent to it: I have shown you the indifference of copper, except a current is going through it, but now I show you another property, I show you *repulsion*, and I could, if I had time, show that this property is universal, far more so than anything you have seen before. Although not so great in amount, nevertheless it is a power equal to gravity, it is even greater than gravity in the mass with which we are now concerned.

I will show you one other substance, and very different to the metals, in order that you may see the effect. I will a take piece of phosphorus. Phosphorus is rather a delicate thing to handle, especially in warm weather like this; nevertheless, I should like to give you a proof that substances other than metals have this property, because I want to show you that all bodies are affected. We shall succeed as soon as I get the larger part of the instrument into the chamber. Though the indicating cylinder is the same, you will soon see the action that takes place, and if I get the action I will not care about the rest. First, I bring up this pole; on making contact, there is the repulsion. By unmaking and remaking it is stopped by the reaction, only it does not touch, and now you see it is repelled again. I might take you to hundreds of bodies, and find them all attracted as iron is, or repelled as bismuth and phosphorus are. There is no one body that is not subject to the one or other action of magnetic force. It is a universal law of nature that *every body in a solid or liquid state is attracted or repelled by magnetic force.*

Taking down this apparatus, and giving you another form, there comes out a very odd consequence, which in fact was the first consequence we met with in this investigation, viz.: that bodies when they are submitted to this kind of action take up a position very unexpected, and utterly unlike anything that we looked for or thought of, or hoped for, in magnetic action. You will easily see that I have something like the other apparatus, a very weak suspension of the silk, with a hook below of copper wire, free from magnetic action. I have stuck a piece of paper on the upper part to make the motion sensible, which paper is fixed to the hook, and therefore will move with it. On that hook I can suspend bodies, and submit them to the action of the magnet. I hope by a little shading of these two poles I shall shut out the air so as to give an idea of the influence of the magnet when bodies are submitted to it in another form. You have seen repulsion—here is another more beautiful form. Here is a piece of bismuth, and I am about, by this silk thread, to suspend it in this little cradle, and then bring it into what I have called the magnetic field, into the place of action between the two poles. It is indifferent so long as the arrangement is not magnetic, but the moment the two poles begin to act upon it, the bismuth will point, but point in an odd position. By making and breaking contact, look how it has swung round. By making contact it will not go round this line, but will swing about that line, and in fact that is the line which it will, at last, take up. Just as the piece of paper swings about between the two poles, so this swings about a little across the poles, or at right angles. When you think of the north and south of the earth, and that this substance is subject to the earth's power, it will point *east and west* instead of north and south, or *across the lines* of magnetic force. I let it *swing*, but you see that the power of torsion is such that it will go by; but before it can pass the next time, I will catch it by the magnet, and you will see it sent back. Making contact, it is sent back by the magnetic force, and will vibrate only across the line.

I might show you many other cases of this description: phosphorus will do the same thing. Every body is repelled by one pole or the other if put into a long form, even if composed of several little bits put together. I may take grains of sand, put these into a tube, make them into a long cylinder, and it will stand along the line of force as bismuth did, precisely contrary to what the magnet does, forming a beautiful contrast to it; and then the phenomena show us that this magnetic force not only has that same kind of duality as respects electricity, as respects northness and southness, but it has another duality, it has that kind of power which makes it magnetic as iron, but in a contrary direction. But we now pass from iron and nickel, the first condition, then nought, and then beyond that to another, the reverse of iron. There is a table behind me to show how various substances are placed in relation to magnetic and diamagnetic action.

Magnetics.

Iron.
Nickel.
Cobalt.
Manganese.
Palladium.
Crown glass.
Platinum.
Osmium.

Neutral.

Air and vacuum.

Diamagnetics.

Arsenic.
Ether.
Alcohol.
Gold.
Water.
Mercury.
Flint glass.
Tin.
Heavy glass.
Antimony.
Phosphorus.
Bismuth.

From iron to osmium these substances are magnetic. Air and vacuum come into a strange neutral condition; and after them come the other bodies as diamagnetics, from arsenic to bismuth, and a thousand more that might be added. I have shewn phosphorus and bismuth, because they are striking; and I will shew water, because, when you see that *water is magnetic*, you will have a better insight into the phenomena of nature than if I left you without that indication. It is not so diamagnetic, to distinguish it from magnetism, as bismuth is, but it is very much affected. Here is a little tube which contains pure water, the glass of which is so nearly balanced in the diamagnetic and magnetic part, as not to be affected. When I place it thus in the arrangement, you will have the action of the water itself as a magnetic body. The action

shewn not so beautifully as if I were
hilosophising in private, but I trust
shew it you. Now I will put it in
eat the experiment, and see what
s of the water when submitted to
ic action, whether it is indifferent, or
ance exhibiting this new and beauti-
nagnetic force. I have put it in suf-
y large to be seen, or if not, the
ndicator will make it evident as to
r it points or not, or whether it
equatorially, that is, across the cur-
or axially, that is, between the poles.
re not much power in water; there-
must be careful that I do not touch
n contact being made I see it is act-
d will not pass the axial point; it will
nt as a magnet, but swing back. On
making contact, you will find that it
ot pass the axial direction, but vi-
about the line across. It is coming
and will finally take up its position.
o ends of that cylinder of water are
epelled, and sent in opposite direc-
You see how beautifully and per-
he water shews the same action as the
h and the phosphorus, *pointing east*
st. It is only a want of time that
s me shewing you fifty other bodies
ing the same kind of action.

, that you may be taken from these
neral observations a little deeper into
stery of these things, I must point
condition of air especially, as in my
things the condition of air, as a na-
ubstance, is the most important part
kind of action for us to pursue. I
w take a tube of air and place it be-
the poles of the magnet; it does not
either in this direction or that. The
tube, if it be at all influenced, will
the one way or the other, according as
ade of plate or crown glass. Crown
(containing iron) is magnetic, and
lass is diamagnetic; but I will give an
ation. When a glass tube is taken, filled
ir and sealed up, and put between the
oles, I cannot perceive that there is any
f action. But you must not suppose
uts out our observation of this action.
means; we get action, which, strange
, I am hardly able to impress upon
nds of those who are the best pre-
by previous study to comprehend
phenomena, and the general effects. I
le to shew you air or vacuum either
tic or diamagnetic at pleasure. When
substances between the two poles of
agnet, in order to examine their pro-
s, I must not forget their nature.
I am examining bismuth there is air
and it; if it had power it might in-
e it, but it has not. If, however, I
on, nickel, cobalt, or water, *I find the*
m between the two poles, and which
is the magnetic field, has a strong action. Here is a jar partly filled with a solution of iron, and partly with water. [The water was floating on a saturated solution of green sulphate of iron.] There is a separation about the middle; it is occasioned only by the difference of gravity; it is one jar of liquid, but the lower part is iron, the upper water. The weakest solution of iron is magnetic; water is diamagnetic; therefore I have two liquids, which, if I put in this place, I can make the medium through which the lines of magnetic force will act. You see that part of the space between these two points is now occupied by water; and if I raise up this jar and put a board under it, the space occupied between the poles will then be a portion of the solution of iron. I am now about to show you, that the tube of air will appear magnetic, or diamagnetic just as it happens to be immersed in the water or in the ferruginous solution. As far as we know, the air that surrounds our globe may have some remarkable relation to it in regard to magnetism. I think this suspender seems nearly fitted to take the tube, and carry it into the solution. First observe, it is a tube of air sealed and sustained in a cradle of copper wire; and beneath the tube, at the middle part, I have placed a smaller tube containing mercury, which serves for a counterpoise or ballast, to make the tube descend into the solution or water, and keep it beneath the surface. Then there is a card above, which, being parallel to the tube itself, will shew you the position of the tube as respects the place of the magnet. This is now suspended; I am about to put it in; it will sink to pretty nearly the level I want; if not, I can raise it by bending the wire. The adjustment will bring it to the centre of motion, and place it so that it is perfectly free to move in the jar. I am taking the risk of the current of air in the room moving the indicator, because I want every thing free, that you may comprehend the beauty of the experiment. The tube of air is now free to move, and at first stands rather obliquely across. Contact will be made, and we shall see whether it goes to the axial condition or not. See how regularly it is progressing to its position, and it will stand at last between the two poles as the piece of paper did, and it will take no position but that between the poles so long as it is surrounded by water, alcohol, ether, which make it take that magnetic position. I now have the opportunity of raising this jar, without disturbing the apparatus in any other respect. You see the things remain unchanged, except that it is now in the solution of iron, and it stands as I place this piece of wood. On making contact you will soon see that, although it is in that heavy fluid, it is vibrating rapidly,

and will stand in this position. The air will take up the diamagnetic position; it will not move from it; that is its true position in a magnetic body; so that you see the air is a magnetic body in water, and a diamagnetic in a solution of iron. Take any one body out of the list, say flint glass; it is a diamagnetic body to those above it, but magnetic to those beneath it. This is settled, you cannot make a distinction; all bodies come to one category; they proceed by degrees; and air, vacuum, and all gases, are in the middle of these.

Having given you these brief observations, I must occupy the time that remains in bringing to your attention what will be the natural consequence of these beautiful actions of matter. Whilst I give you inanimate and inorganic bodies, it does not seem surprising to tell you these things. If I come to show you that *organic matter* of all kinds is liable to this action, it is a different thing. Here is an apple which is diamagnetic. It is magnetic, speaking in a general sense, subject to magnetism, but it is really a diamagnetic body. When I tell you things of this nature are subject to magnetic force, and not only subject to this force, but all magnets, remember all these things we are dealing with are magnetically related to the earth just as much as the needle on which the mariner depends for instruction in his voyage on the surface of the ocean. When you reflect that these are the consequences that follow, you may perceive the strong effects of this power when it can act on these substances so placed as to be liable to the action of the earth. It is in this view I take up a case or two. Although the apple be decayed, I have no doubt, if it contains no iron or ferruginous body, we shall find it diamagnetic. We can soon test it. If I place a piece of copper wire—and all this copper wire has been examined—and hang this up so that it shall come between the poles of the magnet, and the thread is able to bear it, I have no doubt that it will point. On making contact, it stops the vibration. That slice of apple will vibrate about this line. It will not pass beyond except from some gust of air. As long as it is exposed to the magnet, it will point equatorially, or contrary to the magnetic needle. It swings right and left; it is a diamagnetic body by virtue of the water and other principles it contains. I have tried it over and over again: I have not tried asparagus, but will do so now to point out to you and satisfy myself that these bodies are diamagnetic, because it is an important point to us, or at least will be so hereafter. This piece of asparagus will show for itself what position it takes up in the magnetic field. It is only requisite that we should take a longitudinal substance and then the thing points. Making contac stops the action; it went back when it came to this line; it will not go beyond it, but will take up this equatorial position. I might put a mouse there, a flounder, or anything that is elongated in this direction, and you get the phenomena. You must have *longitudinal* bodies to show this effect; and you see how beautifully this substance is vibrating across the magnetic force.

I must occupy the rest of the time, the few moments that remain, in speaking of the magnetism of the earth, which I fear is not distinctly understood as it regards the nature of the lines of force, and the condition of bodies on its surface.

I have told you before that the earth is a magnet, and you know it by the way in which a needle points upon the surface. But it is not a magnet, like that needle. It is not as if we had a large magnet extending from end to end from the south to the north pole, but it is more as if the magnetic force were something dependent on the equator. I will build up an earth to show this. You must not mind the form of apparatus I am about to use. Assuming this bottle were the earth, making the neck the pole, then putting round this earth of our's currents of electricity, you see how differently they come out to what they would do if they were suspended. Here is a globe around which I can throw currents of electricity, which you know are magnetic from the effects you have seen, from this battery. I will throw the magnet out of its direction; we shall get it round this circuit. You will remember what this indicator did with the bar magnet; one end pointed at one pole and the other at the other, and the thing travelled round and stopped parallel in the centre in a curious way. See what it will do here. On making contact it is affected; you see that by the way the needle moves. But observe how it is affected; it is by an equatorial arrangement of magnetic force, not by the polar one. If it were not so, the black end would point to the surface, but you see how it dips or inclines to the surface. If the earth had a magnetic pole, this end of the needle when suspended vertically would point to that part. The needle, however, points down into the mass of the earth soon after leaving the equator, and follows that beautiful and curious relation which belongs to a single wire, when the needle is carried round it. I have put up a rude diagram to illustrate this. Suppose this were a part of the earth, and that were a bar along its polar axis, a magnetic needle at the equator would stand parallel to the horizon. A little further on, where our latitude is, it would lose the horizontal line, and begin to dip until it stood vertically. You will see the difference take an arrangement of wire which is osed to send electricity round the earth lace of an internal magnet. The needle ds parallel to the horizon; it soon dips n we get to our latitude: it dips in this e: when you get nearer the astrono- l pole, the pole of the earth, it dips much; but the dip is much more rapid ou assume the magnetism of the earth to nd upon these currents running equa- lly, than if you suppose it to depend on polar axis. Instead of the poles being he extremities, they must in reality lie e together at the *centre* of the earth.

ut whether the magnetism of the earth be to currents running round the earth, or magnet fixed in the axis, the effect on e bodies is precisely the same; and all stances placed in a line—and if placed in room in relation to the rope before —would be affected in the same way as agnetic bodies; that is to say, precisely reverse of the needle. The slice of apple, ad of pointing axially, points equatorially.

ow, I must briefly conclude by saying t if you consider, from the experiments have seen, that all the oceans, rivers, lakes, on the earth, are diamagnetic, t all things are either indifferent to the gnetism of the globe or influenced by it, t all the rocks and strata not containing are diamagnetic, that if a little statue Carrara marble were placed between the s of this magnet, it would point east west; if a man were hung up here he ald point east and west, and that we selves are affected by the magnetism the earth, although in a very slight ree: speaking as to measure, we are cted by laws that permeate every part he earth: we cannot believe it to be pos- le in nature that these things should take ce and result in nothing. Nothing is roductive in nature, there is no residue action that is useless. We have often n deceived in our experiments—we do know how; we often find action taking ce, and we do not know the cause; we etimes see phenomena, and cannot e them through; but never, when we able to trace them, do we find the least plusage or deficiency in the amount of ver or effect. All the power that God infused into matter, He uses for various cts in creation. It is impossible to ow, as we feel we do, that the earth's ver as a magnet can be permeating all se things, and all living systems, all mals and vegetables, living and dead, l leave them untouched or unaffected. have not the slightest doubt that we ll hereafter find what kind of action s is, and what part it takes in organic d inorganic matter. I think I *see already* mode *in which magnetic action travels* through bodies. I showed you that it goe through water and flame; I think I see how it goes through them by virtue of this diamagnetic condition. I think there is a chance of finding out that the magnetism of the earth may have some relation to the sun, because we have ascertained in some degree a certain relation of light to magnetism. Although it does not come to much in filling up the whole system of things, yet it affirms a great fact, in opening a new door to phenomena of different kinds. When we see that our atmosphere is such that it can become either diamagnetic or magnetic, when we see that the atmosphere is related to the earth beneath and the sun above, and that all these bodies have their magnetic relations, we cannot but think that this power is designed for some high and important purpose. As regards the amount of power, though small, it is enough for our purposes; and is, no doubt, greater as regards the globe than the gravitation which this mass can exert on the substances around. If I were to repeat the experiments of Cavendish and Baily I should see no such power there, as in this magnet, and that slice of apple. I can hardly measure it by a delicate arrangement, but I can measure magnetic force, and that by rough means compared with what Cavendish and Baily used; and you see how it can be raised to a high degree far surpassing gravitation. When we are engaged in the pursuit of science, as I said before, you must suppose that our tendency to know all things makes us hope the more, when we find that a new door is opened to us, and that we touch upon a chamber so large, but hitherto concealed. In such expectations we are never disappointed: we may often take a wrong way, but we never fail to find, in the end, new riches disclosed to us.

VARIETIES IN JAUNDICE.

In some cases of jaundice the yellow colour of the skin, instead of being general, is confined to particular parts of the body. A number of cases of these partial kinds of jaundice have been recorded. Frank has seen one in which the colour was limited to one-half of the body, and did not extend to the other half until fifteen days later. Behrens relates the case of an old man who was seized with apoplexy after a paroxysm of anger, and became hemiplegic: jaundice supervened, and was confined to the hemiplegic half of the body. In some cases the nails alone have been coloured; in others the mammæ; in others again the trunk and the extremities, whilst the face retained its natural colour; in others, lastly, the colour has occurred in scattered patches over the entire body.—*M. Ozanam*, in Encyclop. des *Sciences Médicales*, Juin 1846.

Original Communications.

REMARKS ON
CEREBRAL CONGESTION.

By R. Rowland, M.D.

Lecturer on the Practice of Medicine at Charing Cross Hospital, &c.

[Concluded from p. 492.]

Now these symptoms, so clearly denoting the action of a temporary cause, are very naturally supposed to arise from accidental fulness of the vessels of the brain, and all the remedies which tend to lessen this pressure are put into active requisition. The diagnosis is apparently confirmed by the speediness with which the attacks subside, especially if there is a marked improvement after copious venæsection. In many instances there is no doubt that the symptoms are really the result of congestion, and the question only refers, therefore, to the comparative frequency of such attacks from this and other causes.

I have taken seventy-two cases from different authors (Andral 25, Bright 15, Magendie 9, Abercrombie 10, Lallemand 5). The principal symptoms were violent headache, vertigo, stunning sensations, confusion of ideas, tinnitus aurium, &c., recurring in paroxysms more or less frequently, with intervals of comparative ease. At length, the attack, instead of going off as usual, ended in deeper oppression, and the patient died, in some instances comatose. This was the general character of the cases, which it would be tedious to detail more at length. The symptoms mentioned were variously combined, but in all the attacks were of short duration, subsiding after a time, and again lighting up, especially after some evident cause, as from anxiety, indiscretion in diet, &c. Now, if these minor paroxysms which ended favourably were the result of turgescence of the cerebral vessels, it is surely reasonable to expect some manifestation of this state after the more violent attacks that immediately preceded death.

It might, indeed, be argued that there is much uncertainty in determining some points with regard to these morbid appearances. It is possible, for instance, for the cerebral vessels to be gorged at the time of death, and yet the brain might be found pale and bloodless on dissection in consequence of the gravitation of the fluids towards the lower parts of the body: but, on the other hand, a mistake might be made in ascribing to an accidental engorgement symptoms which were solely independent of it. In individual cases doubt and fallacy might arise on either of those points; but in taking numerous examples, and in looking for general conclusions, errors of this description will correct each other, and the results can hardly be far removed from the truth. The experiments of Dr. G. Burrows have finally settled the question as to the possibility of the brain containing more than its usual quantity of blood, and I beg to refer to his recent work for some excellent practical remarks on cerebral congestion.

In the 72 fatal cases alluded to, the brain was found congested in 15, while in 57 this morbid appearance is not mentioned.

With regard to the more prominent symptoms alluded to in this section, in 30 fatal cases the patients were subject to violent paroxysms of headache. In 8 of these the brain was more or less gorged, but in all there was some other affection to which the symptoms might be referred. In some instances the headache was the chief symptom throughout, and its violence was such as entirely to prostrate the powers of the patient in the paroxysms. Andral (Vol. v. p. 604) gives a case where headache of this kind had recurred during many years. The brain was almost empty of blood, and hypertrophied.

A woman, mentioned by Abercrombie, p. 182, was subject to violent attacks of headache, which were sometimes accompanied by delirium and other symptoms. She died in one of these paroxysms. The chief morbid appearance was a cyst on the brain.

Many similar examples might be added, where the patient died in the midst of an attack, or almost immediately after it, in which various morbid states of the brain were found on dissection, without a vestige of vascular fulness.

Vertigo, tinnitus aurium, sensation of

s in the head, or of blood rushing
gh the brain, and other symptoms
are often supposed in an especial
ar to indicate congestion, are
remarked where the post-mortem
rances are far from confirming
agnosis.

The next branch of this subject
nsideration is, how far convulsive
s are attributable to hyperæmia
e brain. It is supposed by many
n pathologists that the principal
mena of an epileptic paroxysm
pendent on this cause, and others
attribute less to its agency main-
hat it is always present in these
s.

appeal to the morbid appearances
death occurred in the fit seems
r the best mode of deciding this
on; but it might previously be
e to notice some of the general
ents that have been advanced in
rt of this theory.

e circumstances connected with
pileptic paroxysm have been
ht to indicate a congestive origin;
rtigo, for instance, and the other
on precursory symptoms, are
sed to denote the gradual filling
e cerebral vessels, and the intel-
l torpor and drowsiness that con-
after the fit are attributed to
remaining fulness of the vessels.
suggests, too, that the increasing
ty and frequency of these attacks
epileptics might be explained by
ngorgement being more readily
ced, and involving a larger por-
of the brain in cases of long
on.

against the general application
ese arguments, it should be re-
ered, that in many cases of epi-
and perhaps in the majority,
are no warning symptoms which
e said to mark the gradual filling
cerebral vessels, but the patient
suddenly to the ground, even
he is speaking or reading, passing
instant from a state of mental
ss to the lowest degree of intel-
l prostration. And even when
are warning symptoms, they are
f a kind necessarily implying
æmia of the brain. The dreadful
hension of impending evil—the
o, loss of vision, creeping sensa-
spectral appearances, and the
precursory symptoms of epilepsy,
learly the product of *morbid* action in the nervous system itself. They are, strictly speaking, part of the fit, and very often attack epileptics momentarily, without being followed by the convulsive paroxysm. I question, too, whether congestion of the brain would occasion these symptoms except in persons of a peculiar predisposition, and it seems more consonant with reason to regard it as one among many other irritants which excite the attack, and not an element necessary for its production.

When the brain has had its functions disturbed in this manner there is no wonder that it requires some time to recover. A shock to the nervous system, however conveyed, followed by such complete prostration, would have the same result: there must be a period of repose for the disturbed brain to regain its integrity; not for its vessels to empty themselves of their superfluous blood.

Nor is it any more a matter of surprise that the epileptic attacks should grow in violence and frequency with time. There seems to be no necessity of going to cerebral congestion for an explanation of this circumstance. It may be partly accounted for by the advance of the disease in the brain, or elsewhere, the original cause of the epilepsy, but it is, I believe, mainly to be attributed to the debilitating influence of the fit, and especially to the formation of the habit,—a point of immense importance in nervous diseases. The predisposition becomes gradually more and more strong until at length every trivial circumstance is followed by an attack.

Nor can the opinion that the epileptic fit, however it may originate, always occasions cerebral congestion, be adopted without hesitation. It is true that the violent struggling, the spasm of the throat, the throbbing of the carotids, and, in some instances, the redness of the countenance, favour this notion; and, indeed, dissections prove beyond doubt that in many cases congestion is actually present. But are we on this account to conclude that in every epileptic paroxysm the brain is loaded with blood? The violent throbbing of the carotids is no conclusive evidence that the blood is passing through them in an increased volume, any more than it does in other nervous palpitations. The spasm of the throat does not necessarily impede the flow of blood from the brain, for it principally affects the glottis, and the countenance, instead of being unusually florid, is in many cases deadly pale during the attack.

Whatever, therefore, may be the impression as to the pathology of epilepsy, I think it can hardly be maintained that the general symptoms denote so conclusively that the epileptic paroxysm is the result of hyperæmia of the brain, as to set aside any evidence to the contrary derivable from dissections, on the ground of the deceptive character of the morbid appearances. I will now refer to numerous examples where death took place in the fit. It is but fair to state, however, that most of the distinguished physicians from whose works I have selected my cases support the doctrine that the convulsive attacks either originate or are accompanied by hyperæmia of the brain.

Portal has collected from various sources a large number of examples of fatal epilepsy. Of 55 cases in which death took place in the paroxysm, in 14 the cerebral vessels were more or less gorged.

Andral has a few cases where the patient died in the fit. In one, vol. v. p. 606, the cerebral tissue was found of extreme paleness throughout both hemispheres. In another, p. 614, the convolutions were remarkably pale, although the patient died after a fit of great violence.

Morgagni, although he gives several cases of epilepsy, mentions but two where the fatal event occurred during the convulsive attacks. In neither of these is there any allusion to cerebral turgescence as a morbid appearance.

In the fatal cases of epilepsy given by Dr. Bright there appear to be four in which the cerebral vessels were found loaded, and four in which the appearance was not observed.

Dr. Prichard, in his learned work on Nervous Diseases, has several cases of epilepsy, but in two only are there details of the morbid appearances where the patient died during the fit. In one of these there was no congestion, in the other the cerebral vessels were injected, but there were also other marks of inflammatory action.

In Lallemand, vol. ii. p. 273, there is the history of a patient who died in the seizure. There was no congestion.

These examples may be sufficient to show that the morbid anatomy of epilepsy, after making every reasonable allowance for doubt and uncertainty, by no means sustains the theory of cerebral congestion as a universal and essential condition in the fit; but the conclusions which seem naturally to flow from this inquiry are:—

1. That in many cases the paroxysm of epilepsy is attended by cerebral congestion.

2. That in some of these cases the fulness of the cerebral vessels must be regarded as the immediate cause of the seizure, and in others the result of the struggling and spasm.

3. That it is possible for the paroxysm to be completely formed, and to terminate without cerebral turgescence.

III. The convulsive attacks of infancy are analogous in many respects to the epileptic paroxysm. There is, however, a peculiar tendency at this early period of life to cerebral irritation, and in all infantile disorders the brain is very liable to become sympathetically affected. Convulsions are often dependent on cerebritis in young children, and are always an indication of extreme danger; and even when sympathetic of dental or gastric irritation they may terminate in death. I am inclined to subscribe to the opinion that the cerebral vessels are generally more or less loaded in infantile convulsions, especially when they have been protracted; not, however, necessarily causing the fit, but arising in its progress: indeed, in all cases of this kind, although congestion may not be actually present, it is always a circumstance to be apprehended, and to which the treatment should be directed. That it is not an essential ingredient in these seizures may be gathered by the speedy relief that so often follows, when the gums have been lanced freely, or from clearing the bowels of acrid ingesta.

There are, however, many eminent physicians, especially among the French, who believe cerebral engorgement to be not only a frequent but an invariable accompaniment of the convulsive attacks of infancy. This is the opinion of Guersent, Billard, Brachet, and others; but, although from the peculiarities of the brain in infancy, this condition is much more to be expected than in the adult, it seems to be by no means beyond dispute that these seizures may not even in the infant be independent of congestion either as their cause or consequence.

This is a point upon which pathological observations are deficient. Hospital reports and dissections refer principally to the diseases of adults; and even the works written expressly on the disorders of children with which I am acquainted do not contain many histories of this affection, with the post-mortem appearances.

Brachet, indeed, has collected a few cases from various sources, in all of which the cerebral vessels were loaded. Portal gives a few examples where this condition was found, and others where it is not referred to; but more evidence is required before the question can be entirely and satisfactorily decided.

It has been imagined by some physicians that it is even possible to discover the precise portion of the brain where the turgescence exists by observing the muscles that are principally convulsed; but, besides the difficulty there must necessarily be of pronouncing vascular fulness to be morbid which is only perceptible at a limited spot in the brain, nothing is more common than a change of spasmodic movements from one set of muscles to another, — a circumstance which the reflex theory is alone calculated to explain.

IV. There is another class of cases the pathology of which it is very important to ascertain; viz. those where there have been one or more attacks of palsy, from which the patient has recovered, or in which the paralysis being permanent attacks of coma or convulsions occasionally supervene.

In the progress of softening or other organic disease of the brain, attacks of this kind are not uncommon. Sometimes the patient is struck with palsy, from which he gradually recovers, or the improvement of the paralytic limb goes on to a certain point, and is there arrested. Now this vacillation in the symptoms may not look like the effect of gradually increasing mischief by which the cerebral tissue *becomes more* and *more disorganised, and* it might be expected at first sight that whatever symptoms result from this process would be permanent. The theory that cerebral congestion is superadded to the prior disease in the brain offers a plausible explanation of such occurrences; and this, indeed, is unquestionably the true pathology of some of these cases. Affections of the brain sometimes evidently advance in this manner by successive periods of activity and repose, so that their history to be complete must be traced back to a distant period. But these accessions are accompanied by well-marked symptoms which require to be met by correspondingly active remedies. Heat of scalp, intolerance of light, headache, quick pulse, or similar symptoms, would announce the nature of the morbid action. It often happens, however, that an attack of palsy comes on, or that paroxysms of convulsion or coma supervene in paralytic patients without any of these symptoms. The accident can sometimes be traced to gastric or intestinal irritation, or to mental disturbance, or to some shock to the nervous system. In the healthy state circumstances of this kind might cause but little cerebral disturbance; but when there is organic disease within the cranium even slight irritations occasion serious injury to the functions of the brain, without being necessarily attended by hyperæmia of that organ.

It is a very prevailing notion, when recovery takes place rapidly in palsy, that it must have been occasioned by some accidental fulness of the cerebral vessels, and that there is but little apprehension for the future if ordinary care is taken to avoid the exciting causes of that condition. I have already alluded to one instance where paralysis was apparently the result of congestion alone; but, according to my own experience in these cases, this is quite the exception. Leaving out of the question those attacks that are occasioned by the formation of a clot, I believe that in nearly every case of palsy there is permanent disease of the brain of some kind, and when the patient has had more than one attack that there is always some other cause than cerebral congestion.

The apparent completeness of the recovery is, it must be allowed, a fair argument against this opinion; but how very rarely is this perfect restoration of all the functions of the brain observed. Almost always symptoms remain sufficient at least to remind the patient of his malady; either some embarrassment of speech or movement, some perversion of sensation, frequent dizziness, slowness of conception, or defective memory. These or some similar symptoms warn him of his danger. He feels that he is not what he has been, and his life is one of apprehension and alarm. He has, in fact, frequent threatenings, more or less marked, of a seizure, which are luckily arrested before the catastrophe is complete. The causes of these feelings are, it is reasonable to suppose, of the same kind as those which excite the attacks of palsy, or convulsions; for a force that could bring a person to the verge of a precipice might likewise be sufficient to throw him over it. If, therefore, hyperæmia is the cause of the one, it is probable that it must also occasion the other set of symptoms.

Taking the same mode of investigation as in the preceding sections, I find that where there had been repeated attacks of the kinds now alluded to in patients suffering from organic disease of the brain, congestion was found after death in about one-sixth of the cases. In these examples, death took place a short time after an attack. In some, the patients had been bled largely, in others no blood was taken. A reference to the works of Andral, Abercrombie, and Rostan, especially the latter, will shew many examples of fatal palsy appearing in the progress of cerebral softening, in which no appearance of congestion was found on dissection.

V. The remaining division of this subject refers to the exciting causes of congestion, upon which my remarks shall be very brief.

There are certain circumstances that have an undoubted tendency to promote the flow of blood towards the head, and to induce congestion of the brain, and the only questions with regard to these are, whether they may not also act perniciously in some other way, and whether their presence is a sufficient guarantee that the morbid action which follows their application is the result of hyperæmia of the brain.

The effects of temperature on the cerebral functions are very remarkable. Persons who are exposed to the intense heat of the sun in warm latitudes are often struck with apoplectic symptoms that sometimes prove almost instantly fatal. The common opinion with regard to these attacks is, that they arise from the excitement of the heart and arteries, and consequent pressure on the cerebral circulation. We have few opportunities in this climate of studying the morbid anatomy of this complaint, but it may be questioned whether it is not, in some instances at least, merely the result of nervous exhaustion. During the late intensely hot weather a workman from the British Museum was brought to me, who had been exposed for several days to the extraordinary heat of the sun. He complained of headache, giddiness, tinnitus aurium, and an inclination to stupor. There was great exhaustion, and the perspiration escaped abundantly from every pore. These symptoms continued for five or six days. The medicines prescribed were tonics and stimulants. If depleting remedies had been given to this man with the view of removing the blood from the head, they would most probably have caused instant death.

Cold also acts injuriously on the functions of the brain; and, as it drives the blood from the surface of the body towards the central organs, it is very likely to produce congestion of the brain. The state of intoxication and drowsiness which is produced by exposure to a very low temperature might possibly be the result of this action; but these effects are very different from those of ordinary congestion; shewing, at least, that cold has some peculiar action on the nervous centres. There is a considerable resemblance between the effects of cold on the brain and its action on the nerves of the extremities. Torpor and a want of precision in the performance of their functions is common to both. In the nerves, at least, this is not occasioned by congestion, and it might be worthy of more inquiry whether it is an essential element in the cerebral affections that cold induces.

Mental straining, anxiety, the abuse of spirituous liquors, and many other causes of brain affections, undoubtedly are often attended by congestion; but they likewise occasion exhaustion of the nervous powers, and I would merely suggest with regard to them, whether it may not be possible that the fulness of the vessels of the brain when it exists ought to be regarded not as the disease, but as the complication.

9, Woburn Place, Russell Square,
August 28th, 1846.

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from page 415.]

Part V.

Of the applicability of the same laws to the explanation of the phenomena, and elucidation of the nature, of inflammation.

Having thus, by a process of reasoning founded upon the ascertained laws of matter, and confirmed by numerous experiments upon the living body, established the general proposition, that a morbidly increased lateral pressure of the blood contained within the minute vessels of a part will, in a direct ratio to the amount of that increase, cause the exudation of either liquid albumen, or coagulating lymph, or the extravasation of blood, I now proceed to inquire how far the existence of the same physical disorder of the blood contained within the capillary vessels of an inflamed part may be considered to constitute the essential characteristic of that disease. But before attempting to ascertain, by a general examination of the subject, the compatibility of such a view with the known phenomena or attendant circumstances of the disease, it is of course indispensable that the fact of the existence, in every case of inflammation, of this local disorder in the distribution of the blood's pressure, should be clearly demonstrated.

Now whatever objections may be urged against the doctrine which recognises, in the local increase of the blood's lateral pressure, the essence of the disease termed inflammation, no one can deny the fact of the existence of an unnatural amount of distending or lateral pressure in the columns of blood filling the minute vessels of an inflamed part. For that there exists, in every case of inflammation, a certain amount of obstruction to the blood's passage through those vessels, is a conclusion which the united testimony of pathologists, and of microscopical observers, renders indisputable. And, the existence of that obstruction being once admitted, it follows as an inevitable consequence, that the lateral pressure of the fluid detained behind each impediment will be instantly increased in accordance with the physical laws so recently applied to the illustration of my experiments on the kidney.

It therefore only remains for me to examine how far the locally disordered physical condition of the blood thus shewn to be a constant and necessary concomitant of inflammation, is referrible to the causes productive of the symptoms and effects, and removable by the remedies found advantageous in the treatment of that disease. And if I succeed in showing that this physical disorder of the blood corresponds in all these essential characteristics with the pathological condition ordinarily understood by the term inflammation, it must then remain for others to adduce reasons why that morbidly increased lateral pressure of the blood detained in the affected part should not be considered as identical with, and in itself the essence of, the disease so long designated by that ill-chosen word.

It has just now been remarked, that the existence of an obstruction to the blood's passage through the vessels of an inflamed part necessarily implies a morbid increase in the lateral pressure of the fluid columns thus detained. And as all modern pathologists more or less explicitly recognise the tendency of the causes of inflammation to induce, directly or indirectly, such an obstruction, I am, by this admission, spared the necessity of advancing any lengthened arguments in order to show that the action of those causes on the circulation of the part is such as to be inevitably followed by the peculiar physical disorder of the blood which I presume to constitute the essence of inflammation. So far, then, as my general proposition is concerned, any minute discussion of this point would be useless; but as a too exclusive attention to microscopical phenomena seems to me to have placed the mode of action of the exciting causes of this disease in an unnecessary amount of obscurity, a few remarks, having for their object the assignment of a fair and proper value to these observations, may not be altogether useless.

It must, then, in the first place, be remembered, that the disordered circulation observed in these experiments was almost invariably caused by the local application of some irritating substance. Any conclusions drawn from the unnatural phenomena then witnessed are, therefore, in strict reasoning, to be considered as illustrative of the action of only one class of the exciting causes of inflammation, viz. local sources of irritation.

Moreover the parts selected for observation are, from the very transparency which recommends them to the microscopist, evidently possessed of but a slight amount of vascularity, and consequently do not, in their diseased condition, exhibit such marked phenomena as would be presented by parts more copiously supplied with blood. And in most of the observations in question the irritant seems to have been applied to a very minute portion of the tissue under examination, apparently for the purpose of limiting its action to a small number of vessels.

Now, if we contrast these conditions with those existing in the generality of the cases of inflammation which we are called upon to treat in man, any inferences legitimately deducible from the observations in question must, I think, be considered as calculated to throw but a very faint light on the nature of those extensive and serious disorders of the circulation which, occurring in the highly vascular organs of the human body, produce such striking and injurious effects; for neither in their extent, intensity, nor causation, do the disorders thus artificially created correspond with the great majority of cases of inflammation presented to the medical practitioner.

There is, however, one microscopical phenomenon which cannot be passed over without a more detailed examination; I mean the appearance of an unnatural number of white globules in the blood contained within the affected vessels, together with a marked tendency in those globules to adhere to each other, and to the sides of the containing capillaries. This circumstance is, by many eminent writers, considered to indicate the possession by the blood present in an inflamed part of properties different from, or superadded to, its ordinary vital endowments, and which properties are presumed to be, in some inexplicable manner, connected with the production of the accompanying disease.

Now I am far from attempting to offer anything like an explanation of the nature and origin of these or any of the other minute particles which are described by microscopical pathologists under numerous names, as constituting the characteristic peculiarities of the various products of disease. In the present imperfect and confused state of our knowledge it is clearly impossible even to hazard an opinion as to the causes determining the production of each variety in the form, size, colour, and structure of the different microscopical bodies in question. For the discovery of any general laws explanatory of the appearance in one case of inflammation of certain peculiarly-formed globules or corpuscles, and their total absence in other cases under precisely similar perceptible conditions, we must have recourse to other sources of information in addition to microscopical observations. Analytical chemistry must lend its aid, by tracing (as far as its limited power will permit) the degree of connection existing between the appearance of each minute element of morbid development and the composition of the plasma and blood from which it is formed. And even where chemistry and the microscope fail to elucidate the point selected for examination, experiments on the living body—having the conditions of each so judiciously varied from those preceding it, and at the same time so skilfully combined as invariably to lead to some definite conclusion—will, if I mistake not, be found to constitute a synthetical mode of investigation, by the aid of which results of striking novelty and vast importance may, in many instances, be rapidly attained. In short,

iist, the microscopical observer,
experimental pathologist, must
e in studying the nature of
ictions; and it is only by the
ation of their respective ener-
a the same point that we can
e to acquire any considerable
of sound pathological gene-
ns, or useful hygienic and
itical precepts.

o return from this slight di-
to the consideration of the
enon which suggested these
; it does not, I think, involve
it deviation from the rules of
reasoning to suppose that the
which, in the liquor sanguinis
in the vessels of an inflamed
lves a mass of coherent glo-
, in its essential nature, not
r removed from that which
the natural coagulation of the
s portion of the blood. It can
n that a local disorder of the
motion similar to that present
icipient stage of inflammation
cribed by microscopical ob-
is, in other parts of the circu-
ystem, productive of the same
in the physical composition of
id as those now under con-
n: for we know that in gene-
nly condition required for the
ion of a fibrinous coagulum
any blood-vessel is a gradual
tinued retardation of the stream
d. In the large concretions
in the heart and large vessels
a lingering death we have one
of the operation of this law.
e successive fibrinous layers
d on the internal surface of an
nal sac exhibit a still closer
ance to the phenomena pre-
in an inflamed part, inasmuch
lobules there manifest the same
y to adhere to the walls of the
ing vessel. This adhesion of
bules to the vascular walls
me to be mainly referable to
l-known fact, that the rate of
of the external portion of a
traversing any tube is always
n that of the central column;
by no means improbable that,
eir similarity in chemical com-
to the contiguous tissues, the
l lymph globules may naturally
a strong tendency to adhere to
inder certain favourable con-

Now, all observers agree that the flow of blood through the vessels of an inflamed part is considerably slower than natural; we have, therefore, in this case also, that local retardation of the stream of blood which is recognised as capable of inducing the development and aggregation of fibrinous globules in other parts of the circulating system. And unless the opponents of this simple view of the subject are prepared to prove that the phenomena in question occur prior to, and quite independent of, that retardation of the blood's current, I cannot help thinking that it may be quite as philosophical to refer their production to a well-ascertained and familiar law, as to introduce on this particular occasion the mysterious and unintelligible operation of some new and indemonstrable agency. It may also be observed, that as the blood distributed in exceedingly minute columns throughout the capillaries is necessarily brought into contact with a much greater extent of vascular surface than that contained in the larger vessels, any natural attraction existing between that surface and the globules in question will, under similar circumstances, evidently operate most actively in the former portion of the circulating system.

In the next section of this paper I shall endeavour to show how determination of blood becomes a cause of inflammation; and the experiments already adduced prove that the existence of any great amount of venous obstruction will also give rise to the effects of the latter morbid state. It follows, therefore, that the exciting causes of inflammation may act by affecting the circulation through the larger vessels, arteries or veins, of the part, as well as by their direct influence on the capillaries; though it is only by the accumulation of a quantity of compressed blood in the latter thin porous vessels that the disease in question can be essentially constituted.

It will not require many words to exhibit the connection between the production of the symptoms of inflammation, and the existence of the local disorder of the circulation which I suppose to be identical with that disease.

The redness and swelling of the inflamed part are evidently direct effects of the distending force resulting from the increased lateral pressure of the detained columns of blood. The local pain and heat, being chiefly occasioned by an increased supply of arterial blood, are most marked in acute inflammation—the pathology of which will be more fully considered when reviewing the effects of determination of blood. But it may be observed, as a general rule, that the presence of these two symptoms in any case, and the degree of intensity of each, are mainly affected by a simple circumstance,—viz., the preponderance of arterial or venous blood in the minute vessels of the part.

[To be continued.]

SHORT NOTES OF THE

CLIMATE AND DISEASES OF JERSEY IN 1845.

By Edmund Sharkey, A.B. M.B.

St. Helier's, Jersey.

Max. Min. Mean.

Jan.—Therm. in shade. 48° 34° 41·6°

The prevalent disease, variola, of which 8 cases (3 deaths) came within my knowledge.

Feb.—Therm. in shade. 49° 28° 37·1°

Prevalent diseases: variola and scarlatina, the former of which 7 cases, 2 deaths.

Mar.—Therm. in shade 58° 28·5° 39·9°

Prevalent disease, variola, which about this period raged as a plague, carrying off victims from among the higher classes, and persons long considered secure by vaccination. The cases amounted to 49,—10 deaths. Of the former the great majority were children, of the latter 3 were male adults, the rest children.

April.—Therm. in shade 70° 40·5° 51·6°

Variola suffered a very marked decrease.

May.—Therm. in shade 73° 44° 54·6°

This was a very healthy month.

June.—Therm. in shade 83° 53·9° 62·05°

Prevailing disease, fever of mild type.

July.—Therm. in shade 84° 58° 64·2°

Prevailing disease, fever of mild type.

Aug.—Therm. in shade 68·5° 58° 61·3°

This was a healthy month.

Sept.—Therm. in shade 64° 51° 62·1°

Oct.—Therm. in shade. 62° 44° 53·6°

Some cases of typhoid fever and bowel complaint.

Nov.—Therm. in shade. 55° 39° 48·2°

Prevailing disease, fever of mild type; some bronchial affections also occurred.

Dec.—Therm. in shade. 52° 34° 45·6°

Some fever prevailed, with bronchial affections of mild character.

In *January* rain fell on 16 days. The wind was from easterly points, with frost, snow, or rain, on 15 days. There were 10 days of northerly wind. The gardens were still able to exhibit double wall-flowers, and a few polyanthuses and crocuses in blossom.

In *February* there were 8 days of east wind, 10 of northerly and north easterly, and 9 rainy days. In the gardens were found polyanthuses, snow drops, crocuses, and cowslips in bloom.

In *March* 6 days of east wind, 10 of north-east, 8 rainy or snowy days—a heavy fall of snow took place, an unusual thing here.

In London on the 5th of this month thermometer was max. 34°, min. 13°, mean 23·5°; while here it was max. 37°, min. 31°, mean 33·3°.

April had 8 days of easterly winds, and rain on 10 days.

In *May* the prevailing wind was northerly; on 5 days it had a few points to the east. There were 13 rainy days, and hail on one day in the beginning of the month.

In *June* 3 days of easterly wind, 10 showery days.

In *July* 3 days of easterly wind. Rain fell on 12 days. Some thunder and lightning on two days.

In *August* the prevailing winds were N. and N.W. Rain fell on 9 days.

In *September* wind blew from N.E. for 10 days, S.W. for 7. Rain fell on 14 days.

In *October* the prevailing winds were S.E. and S.W. It blew from the N. on 4, from N.W. on 3, and N.E. on one day. Rain on 10 days. The north wind brought a little hoar frost on the night of 21st.

In *November* wind blew from S. and S.W. on 14 days, from N. 3, E. 2, and S.E. 2 days; rain fell on 6 days. There was no frost, and but one hail-shower this month.

ecember wind from N. 3 days, N.W. 8, W. 5, S.W. 5 days. n 16 days. Squalls of hail on . Hoar-frost on one or two

Hooper's meteorological tables he following averages of five ive years.

emperature of the whole year	53·06°
nge of temperature of the hs in the year	28·34°
aily range	11·64°
ariation of temperature from o day	2·41°

bjoin the following abstract of n my own Register 1845 :—

EASES.	CASES.			DEATHS.		
	Male Adults.	Female Adults.	Children under 5.	Male Adults.	Female Adults.	Children under 5.
onia .	4	1	5			1
itis . .	2	8	5	1		2
c Do. .	2	12	1			
h . . .		4				
a . . .		1				
is . . .	3	7	1	1	2	1
. . .	9	14	19		1	
. . . .	13	4	22	5		10
lla . .	4	4	7			
im tre- ens . .	6	1		1		
atism .	3	1				
tis . .		1				
cephalus.		1*				
tery . .	1	1				
. . .		3				
œa . .	1		6			
sis . .	2					
sy . .	2	1				
halmia .		3	3			
lsions .			1	1		1
ca . .	1	1	2			
s . . .	1	1	1	1		
elas . .		1				
on . .		3				
itis with t enlarge- t . . .	1					
ius . .						
s . . .						

	Adult.	Under 5 years.
. . . .	128	73
hs . .	12	15

Total cases. . . 201

Total deaths . . 27

---

his patient was about 9 years old.

ot including the syphilitic forms.

From Public Register of St. Helier's.

Total deaths from all causes . . .	793
From small-pox alone	117
of which 86 were under 5 years of age.	
Population	24000

Deaths in the different Months from Pulmonic diseases, extracted from the Public Register.

1844.	Asthma.		Croup.		Inflam. of Lungs.		Phthsis Pulm.	
	Adult.	Under 5 years.	Adult.	Under 5 years.	Adult.	Under 5 years.	Above 15 years.	Under 15 years.
Jan.	1			2	1	4	4	1
Feb.					2	2	9	1
March					1	2	3	
April				2	2		4	1
May				1	2	1	5	1
June							3	
July	1				2	1	1	
Aug.							3	
Sept.	1			3				
Oct.	1					1	1	
Nov.	1				1		2	
Dec.	2		1	2	1			
Total	7		1	10	12	11	35	4

Total deaths from all causes—

Males.	Females.
333.	312.

1845.	Asthma.		Croup.		Inflam. of Lungs.		Phthsis Pulm.	
	Adult.	Under 5 years.	Adult.	Under 5 years.	Adult.	Under 5 years.	Above 15 years	Under 15 years.
Jan.	1			3		3		
Feb.	2			3	2	7	2	
March	1		5-10	6	2	7	3	2
April				2	2	5	8	
May				1	1	3	6	
June					1	3	1	
July				2			3	3
Aug.						1		
Sep.	1			1	1	1	2	
Oct.					3	1	1	
Nov.	2				2	1		
Dec.	1			1	1			
Total	8		1	19	15	32	26	5

Deaths from Small Pox, 81 over 5 years, 86 under 5 years.

Total deaths from all Causes, 793.

Population by last Census, 2400.

I should observe that the public register is kept not by a medical man, but a very active and intelligent functionary of the police, Mr. H. Manuel, who holds the office of registrar of births, deaths, and marriages, and who takes a great deal of pains in every instance to ascertain the real cause of death by application to the medical attendant; however, he is not in all cases successful, especially as regards the diseases designated by the term "phthisis," which is applied in the language of the island to nearly all chronic diseases which terminate in wasting of the body, as well as to phthisis pulmonalis. It is to be borne in mind also that very many of the deaths from phthisis pulmonalis occur in strangers, who remove to the island while labouring under the disease in its advanced stages.

I had intended to have here subjoined the history of a few cases of pulmonary disease which have come under my observation within the last two or three years in this island, in which it has appeared to me that the climate has added a certain amount of remedial power to that of the treatment employed. It has, however, occurred to me that in order to give the most practically useful information on this point, it would be better to place in juxta-position the remedies, the atmospheric variations, and the changes in the disease; and I think, if some such system as this were generally adopted, an amount of information would soon be accumulated of the greatest use to the physician when called on to decide on the fitness of any particular climate for any individual instance of disease. Reserving this for some future communication, I will only observe generally that the climate of Jersey is, in my opinion, chiefly valuable as affording a mild winter, an object most desirable for patients labouring under pulmonary affections. It constitutes likewise, (as has been observed by Dr. Hooper) to those who have long resided in India and other hot countries, a good preparation for the more northerly parts of the English climate. The danger to be apprehended by such persons consists mainly in the great change which takes place in the relative amount of function performed by the liver, kidnies, and skin; a danger varying directly as the suddenness with which the change is undergone. It appears to me that there is in Jersey a nearer approach to an equilibrium in these respects, and consequently a fairer opportunity afforded to the constitution of exhibiting that remarkable power of adaptation which, under favourable circumstances, enables it to bear such alterations with impunity, than most other parts of this kingdom present.

St. Helier's, July 15th, 1846.

⁂ For valuable statistical information on the influence of atmospheric changes on phthisis, we beg to refer Dr. Sharkey to the work lately published by Dr. J. L. Casper of Berlin, entitled *Denkwürdigkeiten zur Medicinischen Statistik.* Berlin: 1846. At page 50 of this work he will find this subject most fully and ably treated.

OBSERVATIONS SUGGESTED BY

TWO CASES OF LOSS OF LANGUAGE.

By Thomas Chambers, M.D.
Late Physician to the Chelsea Dispensary.

Disease affects the intellectual powers in two ways, either by adding perverted function, or subtracting healthy function. On reviewing the classes of cases which come under these two categories, it will be observed that the causes of perverted action are usually to be sought in a part distant from the great centre of the mind's operations, while diminished or abolished action rightly leads us to suspect material change in that part. The unfounded fancies of the hypochondriac, and the excited imagination of the hysteric, refer us, by their names, under the ribs, or down in the pelvis, for information on their causes; in delirium traumaticum

> "the *pure* brain
> Does, by the idle comments that it makes,
> Foretell the ending of mortality."

In these cases from a distant cause a perverted function is added to the "pure" brain. On the other hand, when function is subtracted, we may usually conjecture some defect in the nervous centre; the deficiency of reasoning in the idiot is usually joined with malformation of the brain so marked as to affect the external appearance; "they have," as Fuller says, either so small that there is not r much wit, or so large that not wit enough for so much Now the manner in which intellectual power, the me- affected, does, I think, some- rve as a means of diagnosis in obscure cases of cerebral dis- e which, from other symptoms, ot know whether to ascribe to w supervention of delirium or to chronic disease of the The causes and cure of the lisorder are certainly not local. nder its influence the memory impressions, but conveys them : a man, for example, will er that some well-known crime n committed, but remembers hat he himself was the perpe- Where, however, there is actual memory, oblivion on some may give a strong presumption mischief in the brain is more ictional. It did so in the following case, which, after this preface, anscribe.

tian B., a German bootmaker, the winter of 1842, used fre- to bring his sick child to me, often saw it at home, so that I opportunity of knowing his of mind and body. He was id intelligent, but a bad English In February, being sap- in his hopes of success in e became morose and dejected. beginning of March his wife me, stating that her husband the use of his native language, at much surprised her, was still express himself in the little of t he knew. I did not take as a f this merely his not under- g my bad German, but could ie report of his wife, who spoke tly. This symptom was inter- as occasionally he seemed as of conversation, and as rational . He complained, by signs, of the head, and confusion of . The bowels were costive, e rapid but soft, and the tongue There was a feverish heat of skin, but it was at all times moist, and occasionally bathed in copious perspiration. A rapid and trembling action of the hands in taking hold of anything, and a peculiar precipitate manner of putting out the tongue, bore a striking resemblance to what we see in delirium tremens. Though very morose and snappish in general, he was occasionally, without cause, joyous and easy, and always seemed glad to see me. There was no intolerance of light, and he was rather pleased with looking out of window. He was cupped, purged, and took small doses of mercury, and had cold lotions to the shorn scalp, with some slight benefit. The resemblance of the symptoms to delirium tremens I thought justified an attempt to remove the sleeplessness by morphia, but it did not appear beneficial. His wife, being in constant alarm for her children, had him removed to a lunatic asylum, where at first he seemed better, but, after six days, he suddenly became worse, and died so rapidly (apparently from asthenia), that they had not time to inform his friends of his dangerous state before his death. The body was brought home, and, assisted by Mr. P. Hewett, I examined the head on the 23d of March. The subarachnoid cellular tissue of the vertex contained some clear fluid, and the veins were somewhat congested. The substance of the brain was firm and healthy. The lateral ventricles contained no more fluid than is natural, but their membrane was slightly opaque. The arachnoid of the fourth ventricle had lost its glossy surface, and appeared as if sprinkled with fine grains of transparent sand: that also which covers the medulla oblongata was perhaps rather opaque. There appeared enough to justify us in attributing the man's death to inflammation of the arachnoid, and not to delirium tremens—an opinion which, before death, it would have been difficult to absolutely pronounce.

The peculiar symptom which caused me to relate this case, namely, the forgetfulness of his native tongue, whilst a strange one was retained, has at first a mysterious air. I think, however, we may in a great measure explain it by supposing that the more complex ideas, to express which he was accustomed to use the language he under-

---

metaphysical Sennertus argues, "cum sit.... proinde pati, non agere; debili- et aboleri potest, non vero depravari." . 2, sect. 7. But he distinguishes and reminiscence in a manner not w done, when we take the word for faculty which ministers ideas of simple .

stood earliest and best, were lost; while the simpler and sensualler ones, which he could put into English, were retained. It was perhaps a partial lesion of memory, rather than a lesion of a peculiar class of ideas.

Many instances, however, are on record of such lesions of peculiar classes of ideas while the rest of the intellectual faculties remain perfect; and, from the striking nature of these cases, they excite so much attention as to make them seem more common than they really are. The following was a remarkable one in point, where, from other symptoms, there was no doubt that there was material change in the brain itself, though the confirmation by actual inspection was wanting.

Harriet C., æt. 12, had typhus fever in December 1845; she had much delirium and low symptoms, but, as is usual with children, soon got about again, and was able to return to school. However, after a few days' attendance, she was one evening on returning thence, taken with a fit, of an undecided epileptic character, had rigors, and was again delirious. The delirium was monotonous, and remarkable for her constant repetition of the word "sinner" with every variety of intonation. Wine and bark were, as during her former attack, resorted to, but symptoms of slight effusion in the brain caused its suspension. She recovered after a few weeks so as to be up and dressed, but with the loss of power to pronounce any word except the one she had so often repeated during her fever. This she made serve to express all her ideas; for denial she shook her head and said "sinner:" assent was expressed by the same word, and bread and butter was called "sĭn-ŭn-sĭnnĕr." She perfectly understood all that was said to her, and appeared capable of reading her usual lessons. Blisters were applied behind her ears, and small doses of mercury administered, and at the same time her mother and family were instructed to teach her as they would an infant to talk. I also took opportunities of showing her, by exaggerated motions of my mouth and throat, the way of forming the letters, in the manner in which the born deaf and dumb are instructed, and found her intelligent and ready. She soon acquired the word "yes," and other elementary expressions, and by the end of the spring was able, as her mother told me, "to talk like an old woman." Symptoms of consumption had, however, appeared, and she died this last summer under the care of another medical man, whose kind efforts to obtain a post-mortem examination for me were unavailing.

The instances usually cited of the loss of memory on special subjects are where it has been the consequence of blows or some such external injury to the head; still both it and general loss of memory will occasionally follow typhus fever. In some epidemics it has done so with such marked frequency as to form one of the characteristics of the prevailing disorder. This was the case in the great plague of typhus which followed the famine at Athens in the Dorian war, as we learn from Thucydides (book ii. cap. 49), where he tells us that of those who recovered, some entirely lost the recollection of their former associates, and some even the idea of their own personal identity. The symptom is an unfavourable one at all times, as showing that material mischief is done to the brain, but it is much less unfavourable when a consequence of fever, than where, as in the case of the German bootmaker lately cited, it commences the illness. The history I have related is sufficient to show it to be curable.

1, Hill Street, Berkeley Square,
Sept. 3, 1846.

POISONING BY LEAD-SHOT LEFT IN A BOTTLE.

An individual was seized with violent colic and symptoms of poisoning, after having drunk several glasses of liquor. Dr. Hohl, who was called to the patient, examined the liquid, and found it to be turbid instead of clear: and on pouring it out into a glass, he discovered at the bottom of the bottle two pellets of shot which had become firmly fixed and converted by corrosion to carbonate of lead. On examining them, he found only a very small nucleus of metallic lead in the centre of each: so long as the liquor was clear, no ill effects had followed its use,—these had only occurred when the turbid portion, near the bottom of the bottle, had been taken. The liquor was proved to hold suspended, a salt of lead, from which the symptoms of poisoning had undoubtedly arisen. This shows that great care should be used in cleansing bottles; and that a few shot left in them may give rise to all the symptoms of lead-poisoning.

MEDICAL GAZETTE.

FRIDAY, SEPT. 25, 1846.

In the course of another week the Medical Session for 1846-7 will have commenced, and before another number of this journal appears, the usual introductory addresses will have been delivered. To judge from the announcements which have been made through our advertising columns for the last three weeks, it would appear that the postponement of the medical reform measures has had very little influence on the Schools. The number of these, although more than sufficient for the wants of the profession, is nearly as great as at any previous period; and if a few "professors" have disappeared from the scenes of their former labours, their "chairs" have been filled with a facility and rapidity which would lead to the supposition that the outcry respecting the ill-paid services of medical teachers, is quite unfounded. Prizes in the shape of gold, silver, and bronze medals, testimonials of honour, and scholarships, are announced among the good things to which the student has to look forward as the reward of industry: and some of the metropolitan and provincial schools vie with each other in the rich promises thus held out to the youthful aspirants for medical honours. In our judgment this system is carried too far: these prizes, by the profusion with which they are bestowed, are too frequently made to serve as a meretricious bait to attract students to particular institutions. If the benefits to be derived from instruction at a school, were always proportioned to the number and value of medals, &c. distributed, there might be some reason to defend the system; but it is well known that they too often serve as objects to allure persons to schools which are entirely deficient in the means of practical instruction. We have heard of one establishment where the prizes were as numerous as the students: in fact, there were no blanks! This system leads to a degrading kind of competition among medical schools, and has the injurious effect of creating a special class of students under the name of prizemen, who work rather to obtain these glittering baubles, than to acquire a sound knowledge of their profession.

The real reform of the medical profession must begin with a sweeping reform in the present system of medical tuition. Apprenticeships, whereby under an act of Parliament students were compelled to waste some of those years which were best adapted for preliminary education and the acquisition of elementary professional knowledge, are now all but abolished. One medical school has this year adopted the novel practice of including classics, mathematics, indentures of apprenticeship, &c. in a general fee; and indeed the exact sum required to convert a man into a surgeon and apothecary, is now made as much a matter of certainty as the purchase of a government annuity! Apprenticeships have not been for a long time practically enforced. They are nominally entered into, but by a mutual arrangement the student commonly finds the means of including the three years' term of medical education, in the period assigned to the apprenticeship.

A student is thus thrown young upon the stage of professional study, and unless he have a parent or relative in the profession, the choice of a school is commonly left to himself. Much of his future success depends upon the selection which he may make. He may meet with bad teachers and bad associates—he may enter himself to an "establishment" such as the defunct Sydenham College, which in its day, judging by the exterior, consisted of two Coffee-shops thrown into one: yet here was an attractive name—a "College" — the "chairs" were filled by "professors" in the respective branches of medical science, the fees were unusually low; and there was a flood of prizes announced for distribution at the termination of the medical session! It is creditable, however, to the good sense of the class of medical students, that allurements of this kind generally fail to procure that support which is essentially necessary to the maintenance of such establishments.

A *medical* school without a hospital or infirmary attached to it, is necessarily deficient in the means of practical instruction; and under a proper system of medical education, this form of theoretical instruction, however good it may be in some rare cases, should, in our opinion, be entirely abolished. Some branches of medical science may, it is true, be taught in establishments unconnected with hospitals; but the practice has the evil effect of compelling a student to follow two sets of teachers, and entirely neglect either his lectures or the wards of the hospital. We are satisfied, from a long acquaintance with students, that there can be no worse plan than that of attending lectures at one institution and hospital practice at another; hence, in the selection of a school, they should especially observe whether it be or be not provided with a hospital or infirmary capable of furnishing efficient practical instruction. They may be well assured that no excellence in teachers apart from a ready access to the wards of a hospital, will recompense them for the deficiency. Upon the choice of a hospital it is unnecessary for us to make any remark. Among the many excellent institutions of this kind which now exist in London, it matters little which a student may select; for there is no hospital school which is not amply provided with the means of giving sound practical instruction.

On one point, however, we wish to offer a word of caution. Medical education has of late years unfortunately assumed the character of commercial speculation. Competition has been carried to that degree that in some instances it is quite certain, from the lowness of the fees charged for attendance, there can be no remuneration for the proper performance of the duties. The courses prescribed by the College and Hall are guaranteed at a certain low sum in one payment; but it is clear that, unless there be a very large number of students in the school, there will be a great temptation to laxity and neglect on the part of the teachers; and although a low consolidation fee for a three years' course of study, may operate as a great inducement to enter to a particular school, yet the student may find in the end that he is paying only for printed certificates, and that if he really require to be instructed in his profession, it will be necessary for him to go elsewhere. True economy will therefore be found in selecting a good and efficient school in the first instance.

NITRATE OF SILVER IN ERYSIPELAS.

M. JOBERT recommends the application of nitrate of silver in erysipelas, in the form of ointment rather than of the caustic itself. He gives three formulæ, of various strengths, for preparing this ointment. To 32 parts of lard, the strongest ointment has 12 parts of nitrate of silver, the next has 8 parts, whilst the weakest has only 4.—*Gazette des Hôpitaux*, 18th August, 1846.

Reviews.

ure and Functions of the
Breast, as they relate to its
Derangement, and Disease.
son, F.R.S. F.L.S. Surgeon
Middlesex Hospital. 8vo.
Churchill: London. 1846.

have felt greatly astonished
r of judgment which could
ed a Fellow of the Royal
d the surgeon of a great
n hospital, to apologise to
for again trespassing upon
d indulgence" in putting
strictly surgical work (Pre-
, or to recommend to "the
her" (p. xv.) the perusal of
plete with discussions upon
umors and a score of other
eases of the female breast,
ersed with occasional allu-
itting and cauterizing pro-
re it not evident that nothing
garded as surprising when
from a surgeon of five and
rs' standing, whose experi-
ed him to no higher flights
g than that which may be
the following sentence.

> variety of practical observations
> ; a period of nearly twenty-five
> at portion of this time having
> l to the bed-side of the patient,
> frequently struck with the want
> the system to enable the con-
> bear up against disease."

its from the source whence
profound observation has
ed, are not likely to make
trong or lasting impression
he profession or the public;
the advertising perfumers
erchants frequently protest,
d to their compounds, "the
nfant might swallow them
ct impunity."
l not enter into any criticism
son's work, except to state,
yle and his arrangement are
nfused and bad; that his
quotation (the extraction of
to thirty-five pages at once)
unexampled; and that the entire amount of really original matter contained in his thick octavo is, in reality, remarkably small when compared with the entire contents of the book. The work does, however, contain some interesting materials, and we shall, therefore, extract a few of these in preference to directing the attention of our readers more particularly to the blemishes with which the production is abundantly fraught.

The following is a useful suggestion with regard to the influence of stays in producing disease of the mammary glands:—

> "There is one position that these glands are placed in by stays that do not properly fit, which is of much detriment to their circulation, where pressure is applied in front, and on the inner side of the glands near the sternum. This ill-directed pressure pushes the glands outwards too much towards the arm-pits, and causes a fold to take place in the skin, which produces pressure against one of the principal arteries that supply these glands (the external mammary); thus, then, in this situation the glands do not obtain a sufficient supply of blood, as they would do if they were in a natural position: the nerves, also, are compressed, consequently their nervous energy diminished, and the lymphatic vessels obstructed; and in many cases that have come under my consideration, this trifling circumstance has been the primary cause of the glands becoming in an unhealthy state: females ought, therefore, to direct their attention to prevent this occurring; it is easily avoided by having the stays looser at the inner part of the bosom, or having two small bones instead of one at the front part of the stays." (pp. 13-14).

The following remarks upon suppression of the mammary secretion from injury to the glands and other mechanical causes, are interesting:—

> "Lacerated wounds occurring across the chest, over the seat of the mammary glands, by causing the parts of the gland divided to become consolidated in the process of the healing of the wound, will sometimes, after delivery, cause suppression of the milk. A woman was admitted into the Middlesex Hospital in the year 1826, who had been knocked down by a horse that had run away with a cart. The wheel passed over her chest, and contused and lacerated both the mammary glands. Sloughing took place, the wound healed, and the patient was discharged cured. I have occasionally seen her since the accident. She has borne several children, but was obliged to bring

---

son has, however, evidently been
ender his work as free as possible
ns to the scalpel, except *in those*
ere it has *been employed by others.*

them up by hand, as no secretion took place in either of the breasts, although every means was employed to induce the glands to perform their functions. Sometimes inflammation takes place in a part of the gland; an abscess forms, which, when healed, produces consolidation of the part of the gland itself, and this may cause the non-appearance of milk in that breast; but then the other will perform its functions in a healthy manner. Scrofulous affections of the axillary glands, producing abscess and consolidation of the adjacent parts in the axilla, by involving the arteries or nerves supplying the gland, may cause suppression of the secretion of milk. Spinal complaints occurring at the lower cervical and upper dorsal vertebræ, will produce suppression of the secretion of milk by the pressure the complaint will necessarily make upon the nerves supplying the glands. A case came under my care to exemplify this remark. A young married woman received a blow upon the back, between the shoulders, which produced chronic inflammation, causing loss of power in both arms. She was subsequently delivered of a fine healthy boy (her second child): there was no appearance of the mammary glands performing their functions, although she had been able to suckle her first child. The patient was cured under my care, and has had since another offspring; and the cause being removed (the complaint in the spinal column) the functions of the glands returned, and she was enabled to suckle her child with satisfaction to herself and benefit to her offspring." (pp. 67-9).

The author objects very strongly to the application of large warm poultices to the breast in cases of milk abscess. He has long employed a lotion made of spirits of wine and hydrochlorate of ammonia[*] in these cases with unfailing success.

The author has tested the medicinal effects of *proteine* in cases of malignant disease, and in other maladies of depraved nutrition. In the former instances he doubts if any benefit has resulted from its use, but observes, that "in struma, even of very long standing, proteine will be found to be of the greatest benefit; several cases of scrofulous affections of long standing have been successfully treated, and some completely cured, by a continuance of this new remedy."

Mr. Tuson has employed the *chloride of zinc* in cases of open cancerous sore, either applying the paste recommended by MM. Conquoin and Bureaud-Riofrey (one part of the chloride to four, three, or two parts of flour, according to the strength required), or, in large irregular cavernous ulcers, a lotion made of the chloride of zinc and water, applied by means of a syringe against the ulcer once or twice a day. He has frequently healed large ulcerated surfaces by means of this remedy, but he justly considers that the chloride is only of use in temporarily arresting the progress of cancer. In cases of deep and extensive malignant disease the use of the chloride of zinc is certainly ill-judged; it is liable to produce intense suffering, and it acts merely on the surface. We have more faith in its power in cases where the degeneration of tissue is confined to the skin, where it is reasonable to believe that the diseased surface may be removed by one or two applications of the escharotic.

The author has experienced excellent effects from the local and internal use of *chloride of carbon* in cases of malignant disease. He writes as follows:—

"In very many cases that have come under my treatment, this remedy has produced perfect freedom from pain, quieted the mind and nervous system generally, prevented the rapid growth and progress of the disease, and has rendered the patient's life comparatively happy to their previous feeling and condition. In some cases it has little or no effect; in a few instances affecting the head, and making the symptoms more aggravated. When sleep is not produced by one or two drops of this preparation, a very small dose of the solution of acetate of morphine will produce immediate effect in such cases where it is likely to be serviceable. Acids will also produce the same result. In cases of uterine irritation, or neuralgic affections of that organ, it has proved highly beneficial, not only in allaying the pain, but by producing a perfect cure. In such cases its exhibition has been internally; but in others, attended with obstinate discharge, it should be used as an injection, as well as being prescribed internally. In violent sickness, when all the usual and most approved remedies have failed to allay the vomiting, three drops of this preparation have at once taken effect: I have in such cases found benefit from applying it locally to the pit of the stomach. In cancer of the pylorus it has proved most efficacious in preventing the return of the food, and in relieving the pain and sufferings of the patient. In sloughing ulcers I have used it extensively, and am not acquainted with a remedy more beneficial. In phagedæna there cannot be a more useful local application; but care should be taken to apply it only to the sloughing parts. The usual strength, as a local application, is a drachm of the chloride of carbon to a pint of water: either as a lotion or an injection, it has been frequently prescribed with poppy decoction and extract of conium, and as an injection in this form its effect has been very successful. The dose internally is from one to four or five drops; but in cases of malignant diseases, one to two or three drops will be quite sufficient to produce sleep, if it is likely to produce this effect. Like all remedies, it does not act on every constitution alike; but if any person doubts its effects, the better way would be to take a dose of three drops, and watch the result. It is a safe remedy." (pp. 412-14).

---

[*] "Two drachms and a half of hydrochlorate of ammonia to seven ounces of spirits of rosemary, *or the same quantity of simple spirit.*" Applied *on lint covered with a piece of oiled silk.*

The application of this remedy, the author states, has produced sloughing and complete removal of fungoid tumors. Mixed with water, it forms a very useful gargle in foul ulcerated sore throats. "It is also of the greatest use in affections of the gums and teeth, removing the unpleasant stinging pains produced by the exposure of some nervous filament; and its use not only gives ease, but removes any unpleasant fœtor of the breath."

Mr. Tuson has used the *perchloride of copper*, in many cases of ulcerated cancerous sores, in the form of a lotion, made of the strength of six grains to one ounce of water. On many occasions its application has been very beneficial, by reducing the ulcerated surface when above the skin, and causing it to heal. As an injection he considers it will prove highly useful in irregular ulcerations of the os uteri, and may be combined with some sedative application, should it cause much pain.

He has employed the *chloride of lead*, in the form of a lotion and an ointment, with some success. As a lotion, it is of use in producing a healthy surface upon a cancerous sore, in removing the fœtor, and relieving the pain; and when the ulcer has not been extensive, it has been healed under its application. In painful neuralgic tumors it has proved very beneficial in relieving the pain. The author thinks that the application relieves pain by paralysing the nerves of the adjacent *parts, so that when a* tumor involves a nerve in its texture, and the pain from this cause becomes very severe, its application may be serviceable in producing ease; but should an operation be contemplated, it should not be performed until the effect of this application has completely subsided, or otherwise the wound may not heal so readily as might be expected (pp. 226-8).

Mr. Tuson has employed the chlorides of potassium, gold, and platinum, in cases of cancer, without benefit. He, however, had reason to expect some most striking results from the use of the latter medicine, and intends to test its effects still further on a future opportunity.

Upon the whole, the portion of this work which treats of the therapeutics of cancer is judiciously written, and may be perused with advantage: it would have formed the nucleus of a useful pamphlet, but, as we have before hinted, this volume is, in proportion to its bulk and pretensions, remarkably deficient in original matter.

LONDON SANITARY COMMITTEE.

THE enforcement of sanitary measures is daily and hourly required in the metropolis; but when brought forward in Parliament, the Bills have been invariably postponed. The neglect of the Legislature to provide for what must be regarded as an urgent necessity, has led to the formation of a London Sanitary Committee, constituted chiefly of the clergy and medical men, whose duty it will be to watch over the health of the Metropolis with a view to protect it from *cholera*, *typhus*, &c. by the removal of the causes that produce these diseases.

The committee purpose making periodical reports with the hope that by such means the attention of the government and the local authorities may be called to the necessity of better sanitary regulations being adopted; it being the opinion of the medical members who have already joined the committee, that one-half of the diseases which afflict the metropolis will result from bad drainage and sewerage, the filthy state in which the thoroughfares are allowed to remain, bad ventilation, and the insufficient supply of wholesome water.

We need hardly observe that the objects of this committee deserve the full support of all medical practitioners: but it is at the same time disgraceful, that the removal of evils which affect large sections of the population, should be left by the government to the unaided exertions of private individuals.

Proceedings of Societies.

MANCHESTER
PATHOLOGICAL SOCIETY.

Retroversion of uterus; retention of urine for fifteen days; fatal inflammation of the bladder.

MR. DUMVILLE presented the genito-urinary organs of a woman, 29 years of age, who died in the fourth month of pregnancy from acute inflammation of the bladder consequent on retroversion of the uterus. The body was examined twenty-four hours after death. The bladder contained some urine; its peritoneal covering was thickened and opaque, and had contracted adhesions with the surrounding intestines. There was also some muscular hypertrophy. The whole inner surface was thickly coated with false membrane, which hung in shreds, and was mixed with earthy matters. The uterus was firmly impacted in the pelvic cavity; it contained a four months' fœtus, and the right ovary had within it the corresponding corpus luteum.

The woman had borne two children, and in the latter months of the second pregnancy suffered from prolapsus of the uterus, which disappeared after delivery. She became a third time pregnant, and during the entire four months preceding death she had suffered from pain in the pubic region, and had also the sensations of prolapse, without, however, any well-ascertained descent of the parts. Twenty-two days previous to death, whilst occupied with manual labour, she experienced a sudden and violent pain in the hypogastrium, with great desire, but inability, to void urine. A surgeon drew off three pints of water, but neglected to repeat the operation for sixteen days. During this interval the bladder was never properly evacuated, the urine mostly escaping guttatim, and with extreme suffering. She was then first visited by Mr. Dumville, who, on examination, discovered a retroversion of the uterus, with the os resting on the symphisis pubis. Marked symptoms of acute inflammation of the bladder presented themselves, which he treated in the usual manner. On introducing the catheter, he withdrew a large quantity of urine, which was strongly ammoniacal, and yielded albumen plentifully. It was of a blood-red colour, and 1012 specific gravity. Microscopically examined, it was found to contain blood-discs, pus-globules, and crystals of neutral triple phosphate of ammonia and magnesia.

The inflammation of the bladder in this case was, in a certain sense, attributable to the retroversion of the uterus, but still more clearly to the neglect of periodically withdrawing the urine by catheter; for the distension caused by the retained urine, and its irritating properties, determined the fatal issue: so much the more to be regretted, seeing the rules for the management of similar cases have been so distinctly defined that no apology remains for the omission of putting them into practice.

Cancer of pylorus—obscurity of symptoms—suppuration of gall-bladder.

Dr. Francis sent for exhibition a fine specimen of cancerous ulcer which involved the whole of the pylorus. Its surface was ragged and burrowing, the margins raised and everted; in length it measured four inches, in breadth two. The stomach was pale, and unusually small; the duodenum was of a deep slate colour.

It was taken from the body of a man, æt. 60, who, within the last eighteen months, had suffered much from privation and severe domestic troubles. He was under the daily and close observation of Dr. Francis for the last six months of his life, during which time he gradually emaciated. There was never any vomiting or complaint of pain, or other symptom indicative of local disease, but he was throughout the subject of a settled gloom, under the influence of which he seemed to be slowly sinking. A few weeks before death he contracted diarrhœa, which was then epidemic.

Dr. Francis considered that a very interesting and instructive feature in this case was the absence of local manifestations of disease, notwithstanding the existence of so formidable a lesion in a part of the stomach so almost uniformly attended with vomiting or pain. It added another to many instances he had had the opportunity of observing at the workhouse, of the fact, that where strong grief had taken possession of the mind it sometimes happened that sensibility seemed to have become so impaired that the symptoms ordinarily resulting from local irritation had not been developed. In several inspections of persons who had died whilst labouring under the melancholic form of insanity, or under that particular state of mind which, in popular language, is described as "a broken heart," he had never failed to find organic disease of some part or other, however obscure its existence might have been during life.

Along with the cancer of the stomach, the gall-bladder was found to be distended with a puriform fluid untinged with bile, which, under the microscope, was seen to contain pus, mucus, and inflammation globules, and behaved as pus on the addition of liq. potassæ. Several superficial granulating ulcers were observed upon the inner surface of the viscus, and, a short distance within its duct, was firmly impacted a round calculus, nearly a third of an inch in diameter, and composed chiefly of cholesterine. The liver did not seem to be unhealthy, and there was no cancer elsewhere than in the stomach.

Two cases of spina bifida—one of them cured.

Mr. Dumville exhibited a preparation of spina bifida taken from a child aged 5 months. The arrest of development happened in the spinous processes of the third, fourth, and fifth lumbar, and first and second sacral vertebræ, which gaped widely apart. The sac in which the cauda equina partly expanded was large enough to contain an ounce of fluid. The tumor was punctured at the urgent instance of the friends, but at a period when the failing powers of life offered scarcely a hope of recovery. The child died with the usual symptoms.

Mr. Dumville related the particulars of another case, in which the congenital deficiency was situate in the same locality. He evacuated the sac by puncture, and the recovery was complete. The child, which was 9 months old at the time of the operation, has now attained 18 months; and its health is unexceptionable. The operation was quickly followed, in this instance, by a profuse perspiration; the face immediately became deeply congested; and there was much derangement of the stomach, attended with vomiting. The child was very fretful, had excessive twitchings, but no distinct convulsion. When the sac was quite empty all the symptoms were aggravated; but on becoming again distended with secretion, which occasionally took place in consequence of mechanical obstruction of the aperture, the symptoms underwent amelioration. The discharge of fluid, with more or less of the symptoms described, having lasted 14 days, the orifice then healed over, and no further secretion of serum following, the child convalesced without any relapse. This case he adduced rather as an exception to, than as an example of a general rule.

Judging from the aggravation of the symptoms whenever any excess of the fluid happened to drain off, it would appear that too much precaution cannot be taken in order to secure the evacuation of the sac as gradually and in as constant a manner as possible, in these cases, and that the plan of operation most suitable for the attainment of this desirable end should be adopted, and, above all, timely put in practice.

Menorrhagia—fatal hæmorrhage.

Mr. WHITEHEAD exhibited the uterus and appendages of a virgin who died of menorrhagia at the age of 17 years and five months. On inspection 20 hours after death, no organic lesion was found in any part of the body, which was every where drained of blood. The uterus appeared somewhat larger than natural, its parietes less firm, but nearly of the usual thickness. Its interior contained a clot of blood which occupied the entire cavity. This clot, from its lower extremity, which terminated at the os tincæ, to the part situated at the fundus uteri, measured two inches and a quarter; and between its two horns, one inch and three quarters. Each horn had a rounded extremity, was semitransparent and fibrinous, and terminated at the corresponding fallopian orifice. The fallopian tubes were empty and of the natural dimensions. The right ovarium was a little larger than the left, and presented several distinct cicatrices in different stages of separation. One of these was recent, depressed, puckered, and appeared at first sight to have an opening in its centre, but it was afterwards found to be impervious. Immediately beneath the next most distinct cicatrix was a firm yellow body, smaller than the preceding. Another paler formation of a similar kind, but still smaller, was observed in the same ovary, but more deeply seated. There were also on the same side two vesicles of different sizes containing a thinnish glairy fluid, one of which was near the surface.

The left ovarium presented on one of its sides a large bluish vesicle, projecting its peritoneal covering considerably above the surrounding surface; this was the size of a small hazel-nut, and contained apparently nothing but serum. Two smaller vesicles, more deeply seated, and two well-marked yellow bodies, were also observed. The labia and cervix uteri were quite healthy. The inner surface of the uterus presented numerous openings scattered over every part of it, obvious to the naked view, some being sufficiently large to admit a good-sized bristle or the end of a lachrymal probe; they were largest and most numerous at each side of the fundus near the horns of the uterus, and at the contracted part of its body near the commencement of the cervix. The openings had a valvular arrangement, the greater number passing in a direction downwards towards the cervix, while those at the upper part of the organ appeared to pass towards the fallopian orifices.

The patient had the lymphatic temperament strongly predominating, with fair complexion, smooth, waxy skin, and possessed a considerable degree of nervous irritability; conditions eminently favourable to the development of the hæmorrhagic diathesis. She began to menstruate favourably at 13 years of age, from which epoch the function was regularly performed, the discharge continuing about four days at each return and the health was unexceptionable till within a short time of her death. On a frosty day in December last she fell down in the street, by which she was severely shaken, but received no other injury. In ten or twelve days afterwards, being the natural menstrual crisis, she began to menstruate in the usual manner. For several days previously she had experienced a feeling of great languor, accompanied by alternate rigors and feverish reaction, and on the second day of the catamenial period she sat down on the step of a street-door, after which she became unable to resume her employment. The menses continued to flow the usual length of time, but when the discharge should have ceased, it became a profuse hæmorrhage, passing away in clots. This was arrested in the course of five or six days by the aid of medicine, leaving her, however, considerably reduced; but in ten or twelve days more the health and strength seemed to be tolerably restored. The menses on the succeeding occasion, which was at the beginning of February and about six weeks after the accident, were in great abundance, and did not cease till sixteen days after their commencement. On the 2d of March, being the third natural period since the accident, the menses again appeared. For the first two or three days the discharge bore the usual character, and was moderate in quantity, but it soon assumed the form of an alarming hæmorrhage, which the prompt administration of remedies failed in the slightest degree to relieve. She died from exhaustion on the 15th of the same month, the bleeding having ceased about 24 hours before death.

Mr. Whitehead considered this case interesting, in a physiological point of view: first, in indicating the precise part of the uterus whence the discharge issued, and inferentially also the part which furnishes the catamenial product; and secondly, in seemingly suggesting the manner in which the latter is separated ordinarily from the circulating mass; namely, by simple exudation from the capillary blood-vessels of the inner surface of the uterus. He had no doubt that the blood, the loss of which occasioned the death of the patient, escaped from the openings previously noted; and judging from the exaggerated state of dilatation of these openings in this instance, and their extreme minuteness in ordinary circumstances, he believed they might possibly be the natural outlets by which the menstrual secretion finds egress.

Aneurism of the aorta—Perforation into the trachea—No resulting hæmorrhage.

Dr. Reid exhibited a preparation of aneurism of the ascending aorta, also the adjacent part of the trachea. The sac, which was entirely filled up by a firm laminated fibrinous clot, equalled in size a small orange: it was nearly orbicular, and took its origin from the aorta immediately below the arteria innominata, occupying the greater part of the circumference of the former vessel, and extending forwards, outwards, and backwards. It had caused partial absorption of the cartilages of the second and third ribs, and the arteria innominata was so compressed by it as to have been much diminished in calibre. The aneurism was likewise adherent to the trachea, into which it had penetrated by interstitial absorption, but the opening was small, and plugged up by the laminated coagula contained within the sac. The mucous membrane of the trachea, from the cricoid cartilages to the bifurcation, was of a deep scarlet colour. The air tubes contained much frothy serum, and the lower lobes of the lungs were greatly congested.

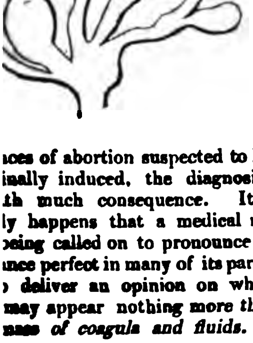
The patient, a man 34 years of age, was in perfect health until September last, when he was seized with symptoms of pulmonic inflammation, which yielded to treatment; though the cough persisted, and on several occasions afterwards the sputa were seen tinged with blood. Dec. 12th, he complained much of a feeling of stuffing in the chest, and about this time expectorated thick white sputa, amounting to half a pint daily. His voice was weak and whispering; respiration slightly stridulous; deglutition somewhat difficult, as if from obstruction opposite the top of the sternum; the expression of the face anxious; pulse of right arm very indistinct, that of left arm full and soft: No. 84. He experienced acute shooting pains in the thorax, and down the right arm,—more especially on raising it above his head. The chest was clear on percussion, with the exception of a space an inch and a half square above and below the cartilage of the second rib, at which part it was slightly protuberant, and at each systole of the heart an indistinct thrill was felt by the hand placed upon it. The heart's sounds, particularly the second, were also distinctly audible in the same locality; in the cardiac region both sounds were perfectly normal. The inspirations were usually prolonged, and the signs indicative of pulmonary catarrh were present. He continued in this state until the middle of February; from which time he suffered from aggravated exacerbations of cough and dyspnœa, occasionally amounting to orthopnœa, till at length he died on the 21st February of this year. Towards the close of life the breathing grew more and more stridulous; the sputum was so tenacious as to be expectorated with great difficulty, and the respirations numbered from 40 to 45 in the minute.

assemblage of symptoms there
ficulty in diagnosing aneurism.
aid wished more especially to
on to was, the circumstance
rism having opened into the
thout consequent effusion of
ll as to the completeness of the
cure of the aneurism; which
entirely effected, that the
overy from the vascular disease
been ultimately accomplished,
interference with respiration,
bulk of the tumor, and other
conveniences, prevented the rea-
is result.

uterine mole—Microscopical
rances of diseased tufts.

.UD brought before the meeting
c uterine mole, together with
of a similar morbid appearance
sion since 1843. He directed
the fact that the chorion tufts
lectic variety of mole can be
l under the microscope from
f chorion-villi not appertaining

lthy placental tufts the terminal
served as broad at the base as at
. In the diseased tufts, con-
moles, the terminal twigs are
found expanded into bulbous or
summits; the same expansions
se seen here and there, involving
efore it terminates in the free
These appearances seem to be
marked to be distinguishable in
although they certainly do not
r perfect in all.



nces of abortion suspected to have
inally induced, the diagnosis is
th much consequence. It not
ly happens that a medical man,
being called on to pronounce on a
unce perfect in many of its parts, is
deliver an opinion on what at
may appear nothing more *than a*
mass of coagula and fluids. If

any fragmentary bits of these tufts can be collected and submitted to the microscope, and if on inspection they can be proved to end in bulbous expansions, the inference would appear to be, that the substance aborted is altered by disease: a diagnosis that would be at once decisive of the innocence of the individual accused, in so far as the decision would or would not involve the presence of a mole. It would likewise materially facilitate the solution of the difficulty of determining whether the foetus were accidentally lost among the expelled subjects, or had degenerated through pathological changes affecting its nutrition.

Dr. Renaud stated that the first of these observations was made by him in the summer of 1843. He had heard Professor Simpson of Edinburgh speak of them in the winter of 1844; but he believed nothing since then but casual remarks had been made on this subject, and he deemed it to be well worthy the more general attention of all interested in such investigations.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, SOUTHAMPTON.

We have looked over the excellent report of the proceedings of this association in the Athenæum. The only articles which are likely to interest our readers are the following abstracts of two papers read in the Chemical Section:—

ON THE PRESENCE OF ATMOSPHERIC AIR AND UNCOMBINED CHLORINE AND CARBONIC ACID FOUND IN THE WATER OF SOME OF THE WELLS IN THE SUBURBS OF SOUTHAMPTON, AND THEIR ACTION ON LEAD. BY H. OSBORN.

The principal object of this paper was to caution persons residing in the neighbourhood of Southampton against the use of leaden pipes for conveying water, and to induce them to avoid the use of lead in any form for that purpose without having the water previously examined, in order to ascertain whether it possessed the property of acting upon the metal and holding it in solution. The author brought forward several instances of the serious consequences which had resulted from the use of water impregnated with lead, and pointed out the different solvent principles found in the water; one of which was uncombined chlorine discovered in a spring in the New Forest. The water possessed the property of bleaching Brazil paper, and reddening litmus paper by evaporation. The amount of uncombined chlorine was estimated as chloride of silver,—by deducting the amount of the latter contained in twenty ounces of water from that of the chlorine contained in the solid contents, the former weighing 1·2 more than the latter—thus indicating 0·296 of uncombined chlorine, which is capable of uniting with 0·864 of lead, forming 1·16 of chloride of lead in the imperial pint. The lead held in solution by carbonic acid, and the oxygen of atmospheric air, was converted into chromate of lead, and estimated as chloride of lead, which indicated 0·25 or 0·2 of the oxide in twenty ounces of water. The solid contents in an imperial pint were found to vary from one grain to three grains, and to be composed of the chlorides of sodium, calcium, and magnesium, sulphate of lime, silica, and vegetable matter. Notwithstanding the preservative property,—which the salts contained in spring water are said to possess, by forming an insoluble crust in the interior of the pipes, it was found that the leaden pipes had been in use for some years, and the action of the water on the lead still continued with as much energy as when they were first laid down, thus showing the presence of the above solvents, and that they met with no resistance from the presence of the saline matter.

Dr. Daubeny made some remarks, pointing out the importance of the inquiry of Mr. Osborn, and the necessity of paying attention to the condition of the water supplied to towns through leaden pipes, or received in leaden cisterns.—Mr. Pearsall stated that he found that the presence of lead may be constantly removed from the water by the action of carbon, and that lead may be always separated by well agitating the water in contact with the air, and mixing up the sedimentary deposits.—The subject excited considerable attention, and many gentlemen joined in the conversation,—all of them adducing additional evidence of the importance of investigating the condition of water supplied to large towns.

ON THE DECOMPOSITION OF WATER INTO ITS CONSTITUENT GASES BY HEAT. BY W. R. GROVE.

Professor Grove, in the first place, called attention to the fact, proved by Cavendish and the French philosophers, that oxygen and hydrogen being exposed to a high temperature, or the electric spark—immediately combined to form water. He then announced his discovery that all the processes by which water may be formed are capable of decomposing water. He believed that the explosion of the mixed gases by the electric spark was due only to the heat of the spark, and not at all to electrolysis. Priestley's method for decomposing gases by passing them through heated tubes was described, and the advantages of using a form of Volta's eudiometer, in which incandescent platina *was employed, to effect* decomposition, pointed out. By an apparatus of this kind ammonia, camphor, the prot- and per- oxides of nitrogen were readily decomposed. It was stated that hydrogen gas exposed to the ignited wire always shows the presence of oxygen; and that it is impossible to pass hydrogen gas through water without its taking up so much oxygen, as to acquire the power of giving luminosity to phosphorus in the dark. It was found that if hydrogen and carbonic acid were exposed to the action of the ignited wire, there was a contraction of one volume, leaving a residue of carbonic oxide. If, instead of carbonic acid, carbonic oxide was employed, the mixed gases expanded in volume; and the carbonic oxide, taking oxygen from the water, was converted into carbonic acid. Here we have two dissimilar results produced by the same cause—by means of hydrogen we take oxygen from carbonic acid, and by means of hydrogen we take oxygen from water. If steam is formed in the eudiometric tube, and acted on by the ignited wire on cooling, a small bubble of gas is formed, which is found to be oxygen and hydrogen in the exact proportions in which they form water. This is the result of the first action of the heated wire:—in a few seconds a small bubble of gas is formed, but if the action be continued for a week it does not increase in quantity. It is, however, easy to remove the bubble as it is formed, and bring a fresh quantity of steam under the influence of the heated wire, and thus collect a quantity of gas which should be quite sufficient for any eudiometric examination. Numerous forms of apparatus were described by which this experiment can be performed. It might be objected that, as the wire was ignited by a Voltaic battery, the decomposition was not due to the heat of the wire, but to an electrolytic action. This objection would not, however, be maintained by those who were acquainted with electrical phenomena. With the view, however, of removing all doubt, the use of the battery was entirely done away with, and all the results were obtained by the agency of heat alone in the following manner.—Into a silver tube a capillary tube of platina is soldered, and this is again connected with a bent tube, which admits of the removal of any gas formed. The tubes being filled with distilled water, their ends being immersed in vessels of oil or water,—the flame of a spirit lamp, urged by the blow-pipe, is brought to bear upon the capillary tube of platina, by which it is almost immediately brought to a white heat. The water is, of course, instantly converted into steam; and this steam is decomposed by the agency of the heat alone. By boiling, we thus convert steam into mixed oxygen and hydrogen gases; and this operation may be continued for any length of time by removing the bubble of gas formed, and bringing a fresh supply of steam under the influence of the heated platina. If fused globules of platina are dropped into water, there is immediately formed a bubble of oxy-hydrogen gas, which may be collected in an inverted tube. Professor Grove went on to show the probable connection between this phenomenon of decomposition and the spheroidal state of fluids when they are projected on capsules of heated platina, which had been referred to a repulsive action of a coating of steam enveloping the spheroid of fluid; but in all probability the revolving drop was undergoing decomposition by the agency of the heat to which it was exposed.

Dr. L. Playfair remarked that the facts which Mr. Grove had announced might possibly be regarded as due to a catalytic action of the platina, such as had been observed by Dr. Faraday, and such as was evidenced in the action of oxide of copper on the hypochlorites. Many bodies at high temperatures exhibited a great affinity for oxygen, which they did not possess at lower temperatures:—as, for instance, silver, gold, and even platina itself, which metals absorbed oxygen when intensely heated, and gave it out again on cooling. If the experiments had been tried in tubes of quartz or silica, they would not have been open to the objection which the use of so peculiar a metal as platina appeared to involve.—Dr. Leeson made some remarks, which went to show that in all probability the bursting of steam boilers might be explained by the discovery of Prof. Grove.—Mr. Hunt explained some experiments of Woolfe on the boilers of some Cornish steam-engines, which appeared to prove the conversion of steam into gas under the influence of the heat to which the water and steam were exposed in the experiments.—Prof. Faraday thought Mr. Grove's discovery would not explain the bursting of steam boilers, which might be easily done by Prof. Boutigny's experiments on the spheroidal condition of fluids. He did not agree with Prof. Grove that the repulsion of the steam was insufficient to explain the spheroidal state. He would rather desire, in the present stage of the inquiry, to discuss the philosophy of the question than the applications of Mr. Grove's discovery. Was it a decomposition of water by the agency of heat, or was it the action of certain substances when heated? It appeared to him that the investigation was a great step onwards and towards a knowledge of the corpuscular action of bodies, and he did not doubt that some remarkable developments as to the influence of caloric in overcoming the force of aggregation would ensue.

Medical Trials and Inquests.

ACTION FOR THE RECOVERY OF THE VALUE OF PATENT MEDICINES.

Palace Court.

Collins v. Vidler.

THE plaintiff, who is a surgeon (?) at Camden Town, and pleaded his own case, sought to recover the sum of £4. 13s. for medicines supplied to the defendant. Plaintiff said that in 1843 he carried on business as a chemist and druggist, but has since become a member of the College of Surgeons. (?) He had invented a "specific," and to enable him to sell it, had taken out the usual license for the sale of patent medicines, and the defendant was supplied in due course with the different articles he asked for.

The plaintiff's brother was called, and proved the delivery of the medicine, but positively denied that he ever gave defendant any advice. *He always sold what was asked for without inquiring what it was for.* They (the purchasers) took it on their own responsibility. Other witnesses were called to prove an admission on the part of the defendant, and a promise to pay.

Hawkins, for the defendant, contended that the license did not justify a druggist in selling his own specifics under colour of a patent, *as there was advice given on the bottle*, and it was therefore clearly an evasion of the Act, which was passed for the protection of the lives and health of the public. It was a very different case from where a person sold the goods of another for profit, and had no reason to give advice. On that ground, therefore, he had to submit that the plaintiff must be nonsuited.

The JUDGE said he felt of the same opinion, that it was an evasion, but would not nonsuit.

Hawkins then insisted that, to prove the real value of the medicine, its ingredients ought to be disclosed.

The plaintiff refused, and said it was a patent article, and had the stamp and label required by law, and which he was entitled to sell. He did not claim it as a *medical bill*, but as for *goods sold.*

Hawkins next urged that if it could be shewn that advice was given during any period, then the plaintiff would have been acting as an apothecary, and not being one would be liable to a penalty, instead of being able to maintain an action.

A witness was called who distinctly proved that *advice was given.*

The learned JUDGE summed up, and told the jury the question as to whether or not there had been an evasion of the Act, was one of law; but if, on the matter of fact, they believed that the plaintiff had not only sold the medicine, but given advice, they would find a verdict for the defendant.

The jury consulted for about ten minutes, and then gave a verdict for defendant.—*Law Times*, Sept. 19th.

Correspondence.

TREATMENT OF CARIES OF THE TEETH.

SIR,—In page 260, No. 66, in making some remarks on Dr. Talma's objections to mercurial amalgams as injurious in stuffing decayed teeth, you observe—"In some instances the caries is so advanced, that the tooth will not bear the pressure necessary for the safe introduction of gold or tin, and dentists must then resort to the extraction of the tooth, or the use of silver amalgam."

I have been surprised that you have not mentioned a *third* alternative, which is often of use when neither of the others is applicable. However, I believe that it is not commonly known, but it is this: scrape out the entire of the softened carious part of the tooth, and rub its interior with a saturated solution of nitrate of silver, or with pulverised nitrate of silver barely wet. In this way the progress of caries may be effectually stopped; and a tooth thus treated will often remain for years, though without any stuffing, and exposed to all the variations of food and drink, without giving any trouble or pain, and without any reappearance of the caries. I know this to be a fact in many instances, though I am not a dentist; and I would beg leave also to suggest to all dentists, that in stuffing decayed teeth, they will always find it beneficial, after scraping away the softened carious parts, to rub the interior of the cavity, in a similar way, with pulverised or fluid nitrate of silver, *before* beginning to stuff them, which will similarly prevent the recommencement of caries.—I am, your obedient servant,

CHARLES EDW. HERBERT ORPEN, M.D.
Fellow and Member of the Royal Colleges of Surgeons of Ireland and of England.

34, Hamilton Square West,
Woodside, Birkenhead.

Medical Intelligence.

MIDDLESEX HOSPITAL.

DR. CHARLES WEST has been elected to the office of Physician-Accoucheur to this Hospital.

THE CHOLERA IN HOLLAND.

THIS disease, under the mild form of what has been termed by the French *cholerine*, has made its appearance at Amsterdam and Rotterdam, and has already attacked a great number of individuals, but not one of the cases has proved fatal.—*Gaz. Med.*

STATISTICS OF THE PARISIAN HOSPITALS, 1846.

WE take the following table of admissions and deaths in the French hospitals and infirmaries for the second quarter of 1846, from the last number of the Gazette Médicale. It is to be regretted that similar statistical tables of the admissions and deaths in the London hospitals are not periodically published.

		Inpatients on the 1st of the month.	Admissions. in the month.	Total Inpatients.	Patients discharged during the month.	Deaths.
April.	Hospitals.	5962	6770	12,732	6,168	677
	Infirmaries.	10749	1102	11,225	932	246
May.	Hospitals.	5887	6805	12,692	6,407	632
	Infirmaries.	10673	1005	11,678	823	200
June.	Hospitals.	5653	7043	12,696	6,373	578
	Infirmaries.	10655	967	11,622	788	219
	Totals.	49579	23692	72,645	21,491	2552

DELIRIUM TREMENS IN AN INFANT.

A LITTLE BOY, five years of age, swallowed by mistake a large quantity of brandy. Vomiting speedily followed, and he passed a restless night, sleeping only toward morning. On awaking, it was observed that he had tremor of the hands, and that he could not hold a cup steadily. Convulsions with cramps ensued. The pulse was slow,—the look timid, the pupil dilated, and the countenance pale. Delirium supervened, and there was dysuria with great thirst. A cataplasm was applied to the abdomen, and calomel and jalap were administered. The symptoms abated about the middle of the day; but towards evening there was a return of the tremor, with other nervous symptoms. An opiate was exhibited, from the effects of which the child slept soundly, and on awaking the whole of the symptoms had disappeared."—*Gaz. des Hôpitaux.*

OBITUARY.

Lately at Sheffield, Dr. Favell, late President of the Provincial Medical and Surgical Association.

On the 15th inst. at Walcot Place, Kennington Road, aged 45, James Kittle, Esq. Surgeon R.N.

Selections from Journals.

CHEMICAL PATHOLOGY.

ANALYSIS OF THE URINE IN LAND-SCURVY. BY DR. HELLER*.

Two cases of scurvy are mentioned by Heller, in which he examined the urine. The subject of the first was a girl, 19 years of age, who had previously enjoyed moderate health, and had a tolerably healthy aspect. The spots were scattered over her whole body, yet were not particularly large. The disease lasted for a considerable time, yet eventually quite disappeared. The urine was of an intense yellowish-brown colour, somewhat turbid, and deposited clouds and flocculi of mucus. When first voided, its reaction was faintly acid, and its odour not unnatural; but it speedily became alkaline, and then evolved a highly ammoniacal odour. This condition was observed so long as the disease lasted. Specific gravity 1021. On the addition of nitric acid, a precipitate of uric acid could at any time be procured, yet never of albumen; even by boiling and the addition of acetic acid, no turbidity was ever induced. 1000 parts of the urine consisted of 949·28 parts of water, and 50·72 of solid constituents. Of the solid matters, there were—

Urea	16·21
Uric acid	1·27
Extractive matter, with much hydrochlorate of ammonia	23·44
Fixed salts	9·80

The fixed salts consisted almost entirely of earthy phosphates and sulphate of potash, a mere trace of chloride of sodium being found. The chief peculiarities in this analysis are, the excess of uric acid [and of urea], and the almost complete absence of chloride of sodium, the chlorine having combined with ammonia, which was present in increased quantity.

The subject of the second case was a youth, aged 16, of previous good constitution, and of a healthy aspect. The disease commenced with slight epistaxis. The entire surface of the body was marked with spots, which were especially large on the feet. During the progress of the disease, the urine was of a brownish-yellow colour and turbid, but assumed a lighter tint as the affection subsided. Both ammonio-phosphate of magnesia and urate of ammonia were deposited; but these gradually disappeared as the signs of amendment shewed themselves. When first voided, the urine was faintly acid; nevertheless, it had always a putrid odour, and speedily became alkaline. The specific gravity was at first 1017, afterwards descended to 1012, but, on the disappearance of the spots, again rose to 1014. At first, traces of albumen were found; but these soon disappeared as convalescence advanced. The other peculiarities of the urine were much the same as in the last case; namely, an increased quantity of hydrochlorate of ammonia, and a diminished quantity of chloride of sodium. The uric acid also was in a still greater portion, being as much as 2·0 in 1000 parts of urine. At the end of six days, the patient was well, and his urine had resumed all its normal qualities.—*Heller's Archiv.*

ANALYSIS OF THE BLOOD AND THE SANGUINEOUS CONTENTS OF THE STOMACH, IN A CASE OF LAND-SCURVY. BY DR. HELLER.

The subject of the case, which proved fatal, was a young man. On examining the body, about four ounces of a thin blackish-brown fluid were found in the stomach. When left at rest in a vessel, this fluid shortly deposited a sediment, about equal in quantity to one-third of the entire mass, leaving the supernatant liquid tolerably clear, and of a yellowish-brown colour. This latter liquid, when examined separately, was found to possess a penetrating, sourish, and putrid odour; its reaction on litmus paper was slightly acid. When treated with nitric acid, or when boiled, as much albumen was precipitated as is contained in an equal quantity of blood-serum. The coagulum of albumen obtained by boiling was reddish, and it retained its red colour when dried, shewing that it contained hæmatine, although no blood-corpuscles were detected by the microscope in the fluid after the subsidence of the above-mentioned sediment. The fluid which remained after coagulating and removing the albumen was of a pale yellow colour, and contained but a very small quantity of biliphæin; on evaporating this fluid to a certain degree of concentration, it gave out a strong soap-like odour, such as is observed on evaporating all other kinds of hæmorrhagic exudations. The *sediment* which the sanguineous contents of the stomach deposited was of a brownish-red colour; beneath the microscope blood-corpuscles, mucus, and a quantity of epithelium, were observed. It contained no coagula, neither could any fibrine be discovered. This sediment, when first deposited, occurred in two distinct layers, the upper of which was almost entirely colourless, whilst the lower one was red. The pale layer, beneath the microscope, was found to consist almost entirely of distended and nearly colourless blood-corpuscles, which were somewhat corroded on their surface.

---

* The concluding portion *of this paper having been accidentally omitted in our last number, we now give it entire.—Ed. Gaz.*

The anæmia of the patient was so excessive, that after death there was scarcely any blood to be seen in the body. In spite of all precaution during the autopsy, not more than two drachms could be obtained, and this was procured from the heart. This blood was of a tolerably bright-red colour, a mucous appearance, and had a somewhat strongly alkaline reaction. It did not separate into clot and serum, though a few small and very loose coagula, which contained a mere trace of fibrine, floated in it. The blood-corpuscles appeared large, and were somewhat corroded; their quantity was relatively very small. As much serum as possible was obtained by filtering, in order to test for bile. It coagulated on the addition of nitric acid, but shewed no trace of bile.—*Heller's Archiv.*

SURGERY.

PERFORATION OF THE INTESTINE.

The following case is related by Dr. Zartmann. A coachman, aged 24, who had previously enjoyed uninterrupted good health, became affected with slight pain in the head and loss of appetite, which continued for a few days; so trifling, however, was his ailment, that it did not interfere with the pursuit of his ordinary occupation. During the continuance of this indisposition, he one day, whilst at dinner, suddenly uttered a loud cry, which was caused by the occurrence of a violent pain in the abdomen. Dr. Zartmann saw him a few minutes afterwards, and found him then suffering severely from the pain, which was most intense in the umbilical region. It was not much increased by pressure in this situation. The abdomen was not tense, the pulse somewhat sharp, the tongue furred, and the features much contracted, whilst the countenance bore an expression of intense anxiety and alarm. Every movement of the body increased the *abdominal pain,* yet the patient's restlessness *was so great,* that he could not remain quiet in one position longer than for a few minutes. A full venesection, and the application of warm fomentations to the abdomen, seemed to relieve the pain for a time; but it shortly returned. In a few hours vomiting commenced, and lasted until his death. The bowels were kept gently and frequently relaxed by the use of injections and slight aperients; and the evacuations presented nothing abnormal. The severity of the pain was, however, not in the least diminished thereby. The abdomen shortly became tense, and highly tympanitic, and at the same time so acutely sensitive, that the slightest pressure, even that of the bed-clothes, could scarcely be tolerated. Death took place on the second day after the commencement of the abdominal pain. On examining the body a yellowish serous fluid, containing abundant flakes of pus, was found in the cavity of the abdomen. The peritoneum was found considerably inflamed, especially on its anterior surface; here and there on its lower surface were several large and small-sized gangrenous spots. The great omentum was likewise much inflamed, and gangrenous in places; its under surface was adherent, from a kind of gelatinous exudation. The small intestines generally, from the stomach down to a certain point, were much reddened, though in places they had a slate-grey colour, and were shiny. At a point situated about the middle of the small intestines were found two apertures through the coats of the gut; these openings were about an inch and a half apart from each other; the upper one had the form and size of a white bean; the lower one was round, with a diameter of about two lines. The margins of both openings were smooth and sharp. The portions of intestine immediately surrounding the aperture were not at all altered in consistence; no thickening or softening. The mucous surface of the rest of the intestinal canal presented nothing abnormal. Nothing remarkable was observed in the other parts of the abdomen.—*Casper's Wochenschrift,* 1846.

STRAW SPLINTS FOR FRACTURES.

At a recent meeting of the Surgical Society of Ireland, Mr. Tuffnell exhibited a form of splint which he had been in the habit of using for some years, and which he believed had first been invented by Baron Larrey. It is made by filling a linen bag of the size of the splint required with unbroken wheat-straw, that used in the country for thatching being the best. The straw must be cut off at the length to fit the limb, and the open end of the bag sewn up. The splint thus made combines the double advantage of being both splint and pad in one, and possesses the following advantage over the wooden or whalebone splints commonly in

e. When lotions are used to subdue the flummation in a recent fracture, the appatus need not be removed from the limb, evaporation takes place as readily through e straw as if the limb was lying unconied. No padding being used, the hard mps formed by tow or wool that has been etted and allowed to dry, and which cause ich pain and inconvenience to the patient, e avoided; and if undue pressure is susined by any projecting process of bone, by serting the point of the finger, and rolling ie straws one upon the other, a hollow is at ice formed for the part. In fractures of ie upper arm, Mr. Tuffnell said he had, in ing the wooden splints and pads, found eat inconvenience from the difficulty of eping the four angles in contact, especially night, and in muscular arms, the edge of ie splint rolling over the other, and at ice displacing the whole apparatus; whilst e straw splints, when bound on the limb, embraced it as to keep up one uniform essure on all sides, and in fractures of the rearm acted most beneficially by pressing e muscles into the interosseous space more id more as the fillets or bandages were ghtened. These, he said, were advantages had found to result from the common use the splints; but what he had to adduce ost in their favour was the power they ve to the military surgeon and county actitioner of forming at once, in almost ery situation in which he could be placed, efficient contrivance for the treatment of ordinary fractures; whilst for hospital actice their cheapness was of no inconsirable advantage; and, in compound fracres, by directing the nurse to take out the iled straw, wash and refit the case with esh, at each dressing, the surgeon was enaed, at the very least expense, to have a ean apparatus, and thus avoid the necesy of keeping a source of effluvia near the tient, at a period when his recovery and ell-being so mainly depend upon pure ntilation and fresh air. In fractures of e forearm, by substituting a fillet and ickle for the ordinary tape or bandage, the tient is enabled to tighten or relax the essure of the splint according to his own nsations of uneasiness or comfort, and the ghtness and regulated pressure make them uch less irksome than the old-fashioned oden splint.

Mr. M'Coy approved very highly of the paratus; and Dr. Jacob said it appeared him to be a most admirable contrivance. t the first glance, one might be inclined to ink it not sufficiently strong; but, on sting the apparatus, it was found a most werful one; and, as Mr. Tuffnell had remarked, the facility of moving the straw, so to accommodate the splint to the inealities of the limb, was a very marked advantage. He looked on Mr. Tuffnell's suggestions as most valuable for securing an extemporaneous mode of coaptation, more particularly to gentlemen who are to practise in the country, where there is generally so much difficulty in persons accommodating themselves in urgent cases, sudden as fractures usually are. He had seen an old hat furnish a very efficient splint in the small fractures of children. Then there was the cover of an old book, but even in obtaining this there is often a good deal of difficulty when the inmates of the house a man is called to are not of literary habits. A capital extemporaneous splint, which Dr. Jacob had seen used in the fractures of children, was the fresh bark of a tree taken off while the sap is rising. It fits admirably, just like a pasteboard soaked in water. He had seen a case managed in this way by a common bone-setter, and the whole thing turned out in a way that would do credit to any of our metropolitan surgeons. — *Dublin Medical Press.*

REMOVAL OF SEVENTEEN INCHES OF THE SMALL INTESTINES — RECOVERY. BY A. BRIGHAM, M.D., SUPERINTENDENT OF NEW YORK STATE LUNATIC ASYLUM.

THE subject of this case is a married woman, aged 38, who had been insane about three years, though this is her second attack, as she was insane for about one year in 1831-32. During her first attack, she stabbed herself in the abdomen with a dull knife, at two different times, but did not wound the intestines. When she came to the aslyum, (June 2nd, 1843), her bodily health was good, though she was disposed to eat too much, and was subject to paroxysms of high maniacal excitement about once a month. No very material alteration in her case was noticed until the 24th of October of the following year, when, about nine o'clock in the forenoon, she obtained a pair of large *scissors* that had been accidentally left in the hall, which she took to her room, and with which she made two wounds into the abdomen, one about an inch and a half above the umbilicus, the other half an inch below it. From the upper opening she took out part of the small intestines, from which she cut off a portion, *seventeen inches* in length, when she was discovered by another patient, and alarm being given, she was forced, not without some resistance on her part, to cease from further injuring herself. Dr. Buttolph, the assistant physician, was near, and saw her immediately, and discovering that the intestine was entirely separated, and also a considerable portion of the omentum, and that one end of the intestine was withdrawn into the abdomen, concluded the case would soon prove fatal under any treatment, and therefore returned the end of the intestine that protruded into the abdomen, stitched up the wounds carefully, and covered them with adhesive plaster,—applied a bandage round the body, gave her an injection of laudanum, and directed an attendant to remain with her constantly. While thus dressing the wound she vomited, but did not appear to have much pain.

On examining the detached intestine, which she had cut into in several places, it was found to contain a small quantity of fæces, and weighed *one ounce and one drachm*; the omentum weighed *one ounce and two drachms*. The ends of the intestine were ragged, and had been cut off obliquely. For a few days she was disposed to vomit, and was not able to retain any thing on her stomach but a trifle of water. Injections of laudanum and broth were administered, and she was kept constantly quiet. After a few days she called for food, and was able to retain a very little, and in about ten days she asked "if she had not ought to take some physic." But it was, of course, not thought right to give any. She continued, without much change, very quiet by aid of injections of laudanum, eating a little several times in the day, and vomiting occasionally, but without any marked tenderness or inflammation of the abdomen, until the 26th of November, *thirty-three* days after the accident, when she had a small discharge from the bowels of hardened fæces, and, on the next day, a copious one. This she said gave her great relief; and from this time she began to improve. The wound had nearly healed, and she was soon able to walk about. Since then she has continued to have regular evacuations from the bowels, though there is rather a tendency to diarrhœa, for which she often takes laudanum. She now "(date not given)" eats tolerably well, though inclined to vomit when she eats heartily. She is able to be about the house, and sews and knits, and is as well as she was for several weeks previous to the injury. She is, however, still feeble, and does not gain flesh, but is calm and quiet, though her mind is rather in a demented state.—*American Journal of the Medical Sciences.*

VITAL STATISTICS.

SANATORY CONDITION OF PHILADELPHIA—EFFECTS OF BAD DRINAGE.

In a recent number of the American Journal of the Medical Sciences, the following statement is made, in remarking upon an observation by Mr. Chadwick, in a memoir published by that gentleman in the Journal of the Statistical Society, for April 1844. "Mr. Chadwick asserts, "that (in Philadelphia) 50 per cent.—half who are born—die on the *average before the* 5th year of age." Now, the number of births registered in Philadelphia in 1830—a year referred to by him—was 7628. The total mortality under the fifth year, including 303 still-born, was 2217, leaving a balance of 5411, instead of 2217, the number which should remain, to bear out his assertion. The table prepared by him, which professes to show the mortality in Philadelphia for different years, from 1830 to 1843 inclusive, is very far from presenting accurate results. The error in relation to the proportion of deaths in infancy to the births, is not the only one connected with that year. In his table, the deaths under one year of age are set down at 1305. This embraces 302 still-born, which should always be excluded from such statements, as their retention tends to increase the proportion of deaths to the population in which they have never been enumerated. He accordingly reckons the deaths at 1 in 40 of the inhabitants, whereas a more correct computation makes the ratio of general mortality 1 in 45·4.

This may be regarded a low rate of mortality, when it is considered that Philadelphia contains a large coloured population; the proportion of deaths among whom is about 2 to 1 of the whites.

These errors connected with the computation for only one year of the series of fourteen years, must, we think, be sufficient to cause the statements exhibited by Mr. Chadwick in regard to the "pressure and progress in the causes of mortality," so far as Philadelphia is concerned, to be taken with great allowance.

It will not be denied that the infantile mortality in Philadelphia is fearfully great. But it is perfectly understood by those having the best opportunities of knowing, that the causes operating so unfavourably are comparatively rare within the city, proper, and better portions of the adjoining districts, where the pavements are good, and well regulated, so as to favour thorough drainage by gutters and sewers. The badly drained and unpaved places, to be met with in the outskirts, and some portion of the adjoining districts, where the poorer class of labourers, especially the blacks, congregate in small and badly-aired dwellings, furnish by far the largest proportion of the annual mortality, both general and infantile; the latter especially.

[Remarks.—The first observation of our American contemporary upon the mortality of children in the year 1830, appears to us to be very inconclusive. We have not Mr. Chadwick's paper at hand, but conclude that his inference with regard to the number of deaths per cent. was taken from an average of the mortality during the thirteen years specified, and not from that of any one particular year. It is very probable that although the number of deaths was greatly e average in 1830, in other years tality rose proportionably above it, average of 50 per cent. in the whole years.—Ed. Gaz.]

INSANITY IN CHILDREN.

ODWARD makes the following obs in a highly valuable "Report of e Lunatic Asylum at Worcester." is another class of unfortunate in, far more numerous than I had supposed, and much more in than those idiots,—I refer to CHILDREN. Since I have been d with this hospital, I have been d in a number of cases of this on. These little patients have in faces, well-formed bodies, good ents of the head, and active minds. ovements are free, easy, and grace any of them are sprightly, even e; they are generally restless, and extremely mischievous, and ly able to speak. In some cases, s there is any mental development, liar characteristics begin to appear, any known cause. In other cases fits have preceded these peculiarities. case the use of the instruments in as supposed to be the cause; epileptic ons probably sometimes arise from parturition. No person familiar se cases would be likely to mistake r idiots; they look differently, walk ly, and have different developments and mind. Some of these children en benefited by medical treatment. the present time under my care for , seems to be going on favourably. ntion has recently been particularly to this subject, as I have been a few days consulted in these dif ases, of which the epileptic child, amed, was one. I have strong hope ne of them may be cured, and then ed. Like other insane persons, there lty in fixing their attention; they ith great rapidity from one thing to and are impatient of restraint. In ch persons particular faculties seem ore active than others. One lad, in ase I was consulted, was not able to te, and, of course, had never learned but was observing of many things, arly of mechanical operations, draw :. He has left many traces of his the buildings and fences of his former e. He has now arrived at manhood, have no knowledge of his present n: when a lad, he was extremely vous, but sprightly and interesting.

in a few days I have seen a very ing case of this description—a girl years old, *who has a well-formed a intelligent and handsome face, a* bright black eye, and easy and graceful manners. She is respectful and obedient in her conduct, gentle and affectionate in her temper and disposition, and usually quiet and unobtrusive, but is easily excited, impatient when urged to do any thing disagreeable to her, and, if opposed, utters a sound, but cannot articulate. She constantly hurries from one thing to another, and, like the insane, wants a safety-valve to let off her excitement. She is excessively fond of music, would listen with apparent delight to the tones of a piano, seemed to have an irresistible desire to perform herself, and would strike the keys with eagerness and great satisfaction. In her visit to me she would seize the bellows which hung in the room, and blow them with great effort and apparent delight. She is perpetually active, but is far less mischievous than formerly. She has very little power of attention, and has as yet never been taught. I have referred the case to my friend Dr. Howe, whose great success in a case apparently far more forbidding is universally known.

A child, two years old, was lately brought to me at the request of the family physician, who had consulted me respecting it. It is unable to sit, to use its limbs, or talk: its face is intelligent, by no means idiotic. It has powers of mimicry unequalled by any child of its age I have ever met with. Having understood that it would imitate its father in whatever motions he made, I tried some experiments with it, and was astonished and amused to find it copy my movements so exactly, and that, too, with the most roguish expression conceivable, apparently much delighted. I have now the case formerly alluded to under my care, for epilepsy, which for some months has been severe and of frequent recurrence. This child has an intelligent face, and a good development of the head, except that it is small. Its form is graceful, and its movements easy and natural. Since it commenced the use of remedies, it has been more quiet and tranquil, less mischievous, sleeps better, has fewer fits, and they are less severe. If the epilepsy can be cured in this case, and I think it may be, I shall have much confidence that it may be taught to articulate, and finally be educated. Indeed, since I have seen this child, some effort has been made to teach it to talk, and with some little success. What has struck me as particularly worthy of remark in all these cases is, that while some of the faculties of the mind are active, and many of them capable of improvement, others are torpid or perverted, bearing, in this particular, much resemblance to certain cases of insanity."—*American Journal of Medical Sciences.*

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Sept. 12.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	663	Males....	441	Males....	493
Females .	617	Females .	503	Females .	475
	1280		944		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts,* 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	110
NORTH — St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	198
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	168
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	225
SOUTH — St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	243
Total	944

CAUSES OF DEATH.

COL. A. Weekly Averages of 5 Summers; COL. B. of 5 Years.

		A.	B.
ALL CAUSES	944	898	968
SPECIFIED CAUSES	943	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		201	188
Sporadic Diseases, viz.—	200		
2. Dropsy, Cancer, &c. of uncertain seat	96	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	158	155	157
4. Lungs, and other Organs of Respiration	219	227	294
5. Heart and Blood-vessels	28	23	27
6. Stomach, Liver, and other Organs of Digestion	106	87	72
7. Diseases of the Kidneys, &c...	11	6	7
8. Childbirth, Diseases of the Uterus, &c.	3	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c.........	12	6	6
10. Skin, Cellular Tissue, &c.	6	1	2
11. Old Age.....................	42	52	67
12. Violence, Privation, Cold, and Intemperance	62	26	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	3	Convulsions	40
Measles	8		
Scarlatina	19	Bronchitis	17
Hooping-cough ..	21	Pneumonia	33
Diarrhœa........	70	Phthisis	144
Cholera..........	8	Dis. of Lungs, &c.	6
Typhus	40	Teething	5
Dropsy	7	Dis. Stomach, &c.	9
Sudden deaths ..	6	Dis. of Liver, &c.	16
Hydrocephalus ..	26	Childbirth	3
Apoplexy	26	Dis. of Uterus, &c.	0
Paralysis	25		

REMARKS.—The total number of deaths was *46 above the summer* and 24 below the annual *average. The deaths* from zymotic diseases were about the summer average. The mortality from diarrhœa has considerably diminished; that from typhus fever has increased. In the North, East, and South districts, the mortality was above the average.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Sept.* 17.—Robert Thomas Martland, Blackburn, Lancashire.—Francis Barlow, Plymouth, Devon.—William Fancourt Tomkins, Yeovil, Somersetshire.—Joseph Clegg, Rochdale, Lancashire. – Charles Sturges, North Leach, Gloucestershire.—James Hunter Blair, Sandon.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer	30·02
„ „ Thermometer[a]............	64·5
Self-registering do.[b] ...... max. 114·5	min. 43°
„ in the Thames water „ 67·5	„ 65°

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·02: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was nearly 6·7° above that of the mean temperature of the month (57·8°). The extreme hebdomadal range in the self-registering thermometer was 71·5°.

NOTICES TO CORRESPONDENTS.

The papers of Dr. Camps and Mr. Pretty will appear in our next number.

The continuation of Dr. Robinson's paper on Inflammation has been received.

We shall have no objection to publish the communication of "Anticontagion," but it must be with his name attached to it.

The letters of Dr. Letheby, Mr. R. H. Hunter, and Mr. H. Smith, King's College, reached us too late for the present number. They will appear next week.

We are obliged to a correspondent for the Leicester Journal.

Received.—Dr. C. H. Orpen.

The 7th Edition, 1 thick vol. 8vo. 30s. cloth,

HOOPER'S MEDICAL DICTIONARY; or Lexicon Medicum. Containing an Explanation of the Terms used in

Anatomy, Materia Medica, Physiology,
Botany, Midwifery, Practice of Physic,
Chemistry, Pharmacy, Surgery,

And the various branches of Natural Philosophy connected with Medicine: compiled from the best Authors. Revised and enlarged by KLEIN GRANT, M.D. Lecturer on Therapeutics.

London: Longman, Brown, and Co.; J. M. Richardson; Hamilton and Co.; Whittaker and Co.; T. Tegg; S. Highley; E. Cox; Simpkin and Co.; Sherwood and Co.; T. Bumpus; Houlston and Stoneman; H. Renshaw; B. Fellowes; T. Hill; J. Churchill; L. A. Lewis; C. Dolman; W. S. Orr and Co. Edinburgh: A. and C. Black; Maclachlan and Co. Dublin: Fannin and Co.

DR. RAMADGE ON PULMONARY CONSUMPTION.

In 1 vol. 8vo. price 8s. the Third Edition, with Coloured Plates,

CONSUMPTION CURABLE, and the manner in which Nature as well as Remedial Art effects a healing Process in Cases of Consumption, explained and illustrated by highly interesting Cases. By FRANCIS H. RAMADGE, M.D. Fellow of the College of Physicians, Senior Physician to the Infirmary for Asthma, Consumption, and other Diseases of the Chest, &c.

Longman, Brown, Green, and Longmans.

LEEDS SCHOOL of MEDICINE.—The SIXTEENTH SESSION.—The General Introductory Address will be delivered by WILLIAM BRAITHWAITE, Esq., on Thursday, October 1st, at 12 A.M.

Anatomy, Physiology, and Pathology—Mr. T. P. Teale, F.L.S. Mr. Nunneley, Mr. Ikin, and Mr. S. Hey.
Anatomical Demonstrations—Mr. Price and Mr. Radcliffe, and Mr. Staniland.
Principles and Practice of Surgery—Mr. W. Hey and Mr. Garlick.
Materia Medica and Therapeutics—Dr. Pyemont Smith and Dr. Heaton.
Chemistry—Mr. Morley and Mr. West.
Principles and Practice of Physic—Dr. Chadwick.
Midwifery, and the Diseases of Women and Children—Mr. Smith and Mr. Braithwaite.
Forensic Medicine—Dr. Pyemont Smith, in the Summer Months.
Botany—Dr. Heaton, in the Summer Months.
Operative Surgery—In the Summer Months.
Clinical Lectures will be given at the Infirmary on Medical Cases—Dr. Hopper and Dr. Chadwick.
On Surgical Cases—Mr. Smith, Mr. W. Hey, and Mr. P. Teale.
Also on Ophthalmic and Aural Surgery, at the Eye and Ear Infirmary—Mr. Nunneley and Mr. Braithwaite.

The Lectures delivered at this School are fully recognised by the Royal College of Surgeons, the Society of Apothecaries, and the University of London.

Gentlemen who wish to enter to the respective Courses may apply to Mr. Garlick, 21, Park Row.

MESSRS. FANNIN and Co. beg to announce, that they intend publishing a Serial Work, principally intended for the use of Students, to be entitled the

DUBLIN EXAMINER in ANATOMY, MEDICINE, SURGERY, &c.

The Work will be published in Monthly Parts, containing not less than 32 pages, 8vo. in each. The first part to appear on the 24th of October next. Price of each Part, 1s.

As it is certain to have an extensive circulation amongst Medical Students, it will form a most desirable medium for the insertion of advertisements of Medical Lectures, Hospitals, and Books.

Scale for Advertising.

	s. d		s. d.
Eight lines	3 0	Half a page	9 0
Every line after....	0 4	Whole page	15 0
Quarter of a Page..	6 0	Bills stitched in	15 0

Advertisements for the first number will be received up to the 15th of October.

Dublin: Fannin and Co. London: Longman and Co.; and H. Renshaw. Edinburgh: Maclachlan and Stewart.

SUFFOLK GENERAL HOSPITAL, Bury Saint Edmund's.—There is now a vacancy for the reception of a PUPIL at the above Institution.—Application for Terms, &c. to be made to Mr. S. Newham, House-Surgeon.

Sept. 21, 1846.

MR. POWER and DR. POWER will continue their Courses of Lectures and Examinations adapted to gentlemen preparing for the Colleges of Physicians and Surgeons, Apothecaries' Hall, University of London, and other medical boards, during the ensuing Session.—Enquire at the Lecture Room, Exeter Hall, Strand, or at 40, Nelson Square, or 3, Highgate Rise.

Exeter Hall, Sept. 24.

Early in October will be published. 8vo. with eleven plates and numerous woodcuts, price 16s. cloth,

MEDICO-CHIRURGICAL TRANSACTIONS, published by the Royal Medical and Chirurgical Society of London. Volume XXIX. Second Series.—Vol. XI.

Longman, Brown, Green, and Longmans.

On October the 1st will be published, price 6s.

THE BRITISH and FOREIGN MEDICAL REVIEW. No. XLIV.

CONTENTS.

Part First.—*Analytical and Critical Reviews.*

1. Dr. Walshe on the Nature and Treatment of Cancer.
2. Dr. Horaczek on Bilious Dyscrasy, or Cholosis.
3. Transactions of the Provincial Medical and Surgical Association
4. Professor Vogel's Pathological Anatomy.
5. Dr. Melzer's History of Foundlings in Austria.
6. Dr. Thurnam on the Statistics of Insanity.
7. Liston's Practical Surgery.
   Liston's Lectures, by Mütter.
8. Dr. Neisser on Acute Inflammation of the Serous Membranes of the Brain and Spinal Marrow.
9. Dr. Burrows on Disorders of the Cerebral Circulation, &c.
10. Hydropathy, or the Cold Water Cure.
11. Dr. Huss's Stockholm Hospital Medical Report.
12. Dr. Esdaile on the Application of Mesmerism in Surgery and Medicine.
13. Mr. Noble on the Brain and its Physiology (Phrenology).
14. Dr Prater on Mineral Poisons.
15. Dr. Coley on the Diseases of Children.

Part Second.—*Bibliographical Notices.*

1. Dr. Fergusson's Notes and Recollections of a Professional Life.
2. Mr. Hassall's Microscopic Anatomy.
3. Peschel's Elements of Physics.
4. Dr. Lindley's Vegetable Kingdom.
5. Mr. Quain on the Anatomy of the Arteries of the Human Body.

Part Third.—*Natural History and Treatment of Diseases.*

1. Dr. Symonds on Excessive Trust in Nature in the Cure of Diseases.
2. Dr. Mühry on the Present State of Homoeopathy in Germany.
3. Dr. Balfour's Report on the Homoeopathic Treatment of Acute Diseases in Dr. Fleischmann's Hospital, Vienna.

London: John Churchill, Princes Street, Soho.

MEDICAL, LEGAL, and GENERAL MUTUAL LIFE ASSURANCE SOCIETY. —The only Office, founded on principles of Mutual Assurance, in connection with the Medical and Legal Professions.

R. W. MORRIS, Actuary.

Offices—126, Strand.

MR. CHURCHILL'S PUBLICATIONS FOR OCTOBER.

1.

DR. ROYLE, F.R.S.—A MANUAL of MATERIA MEDICA and THERAPEUTICS. With Engravings on Wood by Bagg. Fcp. 8vo. cloth.

2.

DR. MARSHALL HALL, F.R.S.—PRACTICAL OBSERVATIONS and SUGGESTIONS in MEDICINE. Second Series, post 8vo. cloth.

3.

MR. GRIFFITHS.—CHEMISTRY of the FOUR SEASONS. With Engravings on Wood, post 8vo. cloth.

4.

DR. GOLDING BIRD, F.R.S.—ON URINARY DEPOSITS: their Diagnosis, Pathological Indications, and Treatment. 2d Edition, with Additions, post 8vo. cloth.

5.

DR. GLOVER.—THE PATHOLOGY and TREATMENT of SCROFULA. With Engravings on Steel, plain and coloured, 8vo. cl.

6.

DR. WHARTON JONES, F.R.S.—A MANUAL of OPHTHALMIC MEDICINE and SURGERY. With Illustrations on Wood and Engravings on Steel, coloured, fcp. 8vo. cloth.

7.

ERASMUS WILSON, F.R.S.—DISEASES of the SKIN: their Diagnosis, Pathology, and Treatment. 2d Edition, with Additions, and Illustrated with Eight Engravings on Steel, accurately coloured, 8vo. cloth.

8.

MR. T. S. LEE.—ON TUMOURS of the UTERUS and its APPENDAGES; being the Jacksonian Prize Essay. 8vo. cloth.

9.

DR. CARPENTER, F.R.S.—PRINCIPLES of HUMAN PHYSIOLOGY. 3d Edition, with Additions both in Letter-press and Plates, 8vo. cloth.

10.

MR. W. WHITE COOPER.—PRACTICAL REMARKS on NEAR SIGHT, AGED SIGHT, and IMPAIRED VISION. Post 8vo. cloth.

11.

DR. UNDERWOOD'S TREATISE on the DISEASES of CHILDREN. 10th Edition, with Additions and Corrections, by HENRY DAVIES, M.D. 8vo. cloth.

12.

DR. MACKNESS.—THE MORAL ASPECTS of MEDICAL LIFE. 8vo. cloth.

13.

DR. G. ROBERT ROWE, F.S.A.—ON NERVOUS DISEASE and INDIGESTION. 9th Edition, 8vo. cloth.

14.

DR. WHITE.—A TREATISE on the *PLAGUE*: with Hints on Quarantine. 8vo. cl.

EDINBURGH REVIEW, No. 170. —ADVERTISEMENTS for insertion in No. 170 of The Edinburgh Review are requested to be sent to the Publishers' by Tuesday, the 29th inst.; and BILLS on or before Friday, October the 2d.

39, Paternoster Row, Sept. 25, 1846.

Just published, in 8vo. price 8s.

THE PHILOSOPHY of LIFE, HEALTH, and DISEASE: New and Original Views explanatory of their Nature, Causes, and Connexion; and of the Treatment of Disease upon a few General Principles, based upon the Laws of Nature and Common Sense: the fruit of Thirty Years' Professional Experience. By CHARLES SEARLE, M.D. M.R.C.S.E.

John Churchill, Princes Street, Soho.

NEW WORK BY LIEBIG.

On the 30th inst. will appear, in 8vo. cloth,

CHEMISTRY and PHYSICS in relation to PHYSIOLOGY and PATHOLOGY.—Also,

VOGEL'S PATHOLOGICAL ANATOMY. Edited and translated by Dr. DAY. 8vo. with 10 Illustrations engraved on Steel.

London: H. Baillière, Publisher, 219, Regent Street.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES, offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Saltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton; by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the public against spurious articles.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."

PHARM. JOURNAL, May 1846.

Prepared by Dinneford and Earland, 172, Bond Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

-Vol. XXXVIII.
ries, No. 75.]

Price { Unstamped, 8d.
Stamped.... 9d.

LONDON
DICAL GAZETTE
OR
Journal of Practical Medicine.

} OCTOBER 2, 1846. { Also in Monthly Parts.

LECTURES.

Page
Lectures on Medical Jurispru-
livered at Guy's Hospital, by
Taylor, Esq. F.R.S.: Lecture
.... 561
m of Survivorship 561
Living 564
.... 566
arches on the Composition of
l in the condition of Health and
e. By MM. A. Becquerel and
r. Part II.................... 566
.... 566
Fever 567
.... 567
.... 568
d Cause of the Buffy Coat 568
ions which have been offered .. 568
nchitis 569
eumonia 569
urisy 569
ry Tubercles.................. 570
ons 571

NAL COMMUNICATIONS.

iplets, in which one Child was
e, with two Fœtuses which had
ity for three preceding months:
e Remarks upon the probable
Death, &c. By William Pretty,
.... 572
teral Operation of Lithotomy,
Lithotrity in the Female. By
Warren, M.D. Professor of
and Operative Surgery in
University, Boston 574
logical Characters of the Blood
sts in the Exanthemata. By
Camps, M.D. Edin. Physician
rringdon General Dispensary . 579

LEADING ARTICLES.

of Intra-mural Interments on
ealth 581

REVIEWS.

ature chez les Enfants à l'état
ique et pathologique. Par le
i Roger 584
for Bathers; or, Hints on the
inds of Baths. By a Medical
of Her Majesty's Household .. 589

PROCEEDINGS OF SOCIETIES.

Page
British Association.—On the Diseases resulting from the immoderate Use of Tobacco. By Thomas Laycock, M.D. Physician-Accoucheur to the York Dispensary, and Lecturer on the Theory and Practice of Medicine. Including some Results of Experiments on the Physiological Action of Tobacco. By Samuel Wright, M.D. Physician to Queen's College Hospital, Birmingham, &c. 590
On the Differences in the Physiological Actions of the Yellow and Red Prussiates as an Evidence of their containing dissimilar Radicals. By H. Letheby, M.B. Lecturer on Chemistry at the London Hospital 593
Medical Society of London.—Dr. Willshire on a New Era in Therapeutical Inquiry . 594

SELECTIONS FROM JOURNALS, ETC.

Case of a Blood-vessel communicating with the Cavity of an Abscess. By Dr. A. M. Adams, M.D. of Glasgow 571
On the Presence of Sugar in healthy Blood. By M. Magendie 599
Intestinal Fistula cured by Compression. By Dr. O'Ferrall 691
Compound Dislocation of the Ankle-joint—Recovery, without Suppuration of the Joint, in Thirty Days. By Dr. M. H. Stapleton 601
Reduction of Old Dislocations.............. 602

CORRESPONDENCE.

Case of Iliac Abscess. By H. Smith, Esq. House-Surgeon to King's College Hospital 595
On the Contagion of Cholera. By R. H. A. Hunter, Esq. Surgeon 57th Reg. 595
On the Treatment of Asiatic Cholera. By C. Searle, M.D. M.R.C.S.E. of Bath 597
Note from Mr. Richard Phillips.—London and Edinburgh Pharmacopœias........ 591

MEDICAL INTELLIGENCE.

Scientific Congress at Genoa 580
Inauguration of a Statue to Fodéré 580
Progress of Cholera in the East............ 598
A Dentist's Circular 598
The Leicester Infirmary 598
Royal College of Physicians.—New Members 599
Obituary.................................. 599

WEEKLY TABLES, ETC.

[*For* ADVERTISEMENTS, see next page.

ST. BARTHOLOMEW'S HOSPITAL and MEDICAL COLLEGE.—The Winter Session will commence on Thursday, the 1st of October next, with an Introductory Address by Mr. Paget, at 7 o'clock, P.M.

LECTURES.

Medicine—G. Burrows, M.D.
Surgery—W. Lawrence, F.R.S.
Descriptive Anatomy—F. Skey, F.R.S.
Physiology and Morbid Anatomy—Mr. Paget.
Superintendence of Dissections—Mr. M'Whinnie and Mr. Holden.
Chemistry—Mr. Griffiths.
Materia Medica—G. L. Roupell, M.D. F.R.S.
Midwifery, &c.—E. Rigby, M.D. F.L.S.

SUMMER SESSION, 1847, commencing May 1.

Botany—F. J. Farre, M.D. F.L.S.
Forensic Medicine—W. Baly, M.D.
Midwifery, &c.—E. Rigby, M.D. F.L.S.
Comparative Anatomy—Mr. M'Whinnie.
Practical Chemistry and Natural Philosophy—Mr. Griffiths.

Hospital Practice.—The Hospital contains 630 Beds, and relief is afforded to 48,000 Patients annually. The in-patients are visited daily by the Physicians and Surgeons; and during the Summer Session four Clinical Lectures are delivered weekly; those on the medical cases by Dr. Roupell and Dr. G. Burrows; those on the surgical cases by Mr. Lawrence and Mr. Stanley. The Out-patients are also daily attended by the Assistant-Physicians and Assistant-Surgeons.

Collegiate Arrangements.—Warden, Mr. Paget. Students can reside within the Hospital-walls, subject to the rules of the collegiate system, established under the direction of the Treasurer and a Committee of the Governors of the Hospital. Some of the Teachers and other Gentlemen connected with the Hospital also receive Students to reside with them.

Scholarships, Prizes, &c.—At the end of the Winter Session the Annual Examination will be held for a scholarship, of the value of £45 a year, and tenable for three years. The examinations for the Wix, Bentley, and Collegiate Prizes, and those of all the classes for prizes and certificates of merit, will take place at the same time.

Further information may be obtained from any of the medical or surgical Officers or Lecturers, or on application at the Anatomical Museum, or the Library of the College.

WESTMINSTER HOSPITAL SCHOOL of MEDICINE.—The WINTER SESSION will commence on Saturday, October 3, with an Introductory Lecture by Mr. Erichsen.

Anatomy and Physiology—Mr. Erichsen, and Mr. J. W. C. Pennell.
Practical Anatomy and Demonstrations—Mr. J. W. C. Pennell, and Mr. Barnard Holt.
Surgery—Mr. B Phillips, Assistant-Surgeon to the Hospital.
Medicine—Dr. Hamilton Roe, and Dr. Kingston, Physicians to the Hospital.
Materia Medica—Dr. Basham, Physician to the Hospital.
Chemistry—Mr. Harman Lewis, A.M.
Midwifery—Dr. Andrews, and Dr. F. Bird.
Dental Surgery—Mr. Clendon.
Physics Mr. C. Brooke.
Botany—Dr. Basham.
Forensic Medicine—Dr. F. Bird.

General Fee to all the Lectures—Forty Guineas.
Further particulars may be obtained at the Hospital.

N.B.—Facilities are afforded for those who ma wish to dissect in the Evening.

August 18, 1846.

SAINT GEORGE'S HOSPITAL.—MEDICAL SCHOOL.—The Session 1846-7 will commence on Thursday, October 1, with an Introductory Address by Sir B. Brodie, Bart. at half-past One o'clock.

Descriptive and Surgical Anatomy—Mr. Prescott Hewett.
Physiology and General Anatomy—Dr. Handfield Jones.
Practical Anatomy—Dr. H. Jones, and Mr. Athol Johnson.
Chemistry—Mr. Brande, F.R.S.
Materia Medica—Dr. Pitman.
Medicine—Dr. Nairne, and Dr. Page.
Surgery—Mr. Cæsar Hawkins, and Mr. Tatum.
Midwifery—Dr. Robert Lee, F.R.S.
Medical Jurisprudence—Dr. Bence Jones, F.R.S. and Mr. H. C. Johnson.
Botany—Mr. Henfrey, F.L.S.
Practical Pharmacy—Mr. J. Hammerton.

Sir Benjamin Brodie will deliver, during the Winter Session, a Course of Lectures on some important Points in Surgery, *gratuitously*, to the Pupils of the Hospital.

Clinical Lectures are given during the Winter and Summer Sessions.

SCHOLARSHIPS, PRIZES, &c.

At the end of the Winter Session, Examinations will be held for two Scholarships, of the value respectively of £40 and £20 per annum, each tenable for two years. At the same time, Examinations of all the Classes for Prizes and Certificates of Merit will take place; when also Prizes, given by Sir Benjamin Brodie and Dr. Chambers, for the best Clinical Reports will be awarded.

Some of the Lecturers and other gentlemen connected with the Hospital receive Students to reside with them.

Further information may be obtained from any of the Lecturers; on application at the Anatomical Theatre, Kinnerton Street, Wilton Place, and at the Royal Institution, Albemarle Street; or from the Apothecary of the Hospital, who is authorized to enter the names of Students.

SCHOOL of ANATOMY and MEDICINE, adjoining St. George's Hospital.—The Introductory Address will be delivered by Dr. Theophilus Thompson, F.R.S. on Thursday, October 1, 1846, at half-past 2 o'clock.

Anatomy, Physiology, and Surgical Anatomy—Mr. Lane, Dr. W. V. Pettigrew, and Mr. G. E. Blenkins.
Descriptive and Practical Anatomy—Dr. W. V. Pettigrew, and Mr. G. E. Blenkins.
Prosectors and Anatomical Tutors—Mr. F. Hatchard, and Mr. Croft.
Chemistry—Mr. Rodgers.
Materia Medica and Therapeutics—Dr. Lankester, F.R.S. F.L.S.
Midwifery and Diseases of Women and Children—Mr. Bloxam.
The Principles and Practice of Medicine—Dr. Goolden, and Dr. Theophilus Thompson.
The Principles and Practice of Surgery—Mr. Lane and Mr. Pilcher.

SUMMER SESSION.

Medical Jurisprudence—Mr. Ancell, and Mr. Warder.
Botany—Dr. Lankester, F.R.S.
Practical Chemistry—Mr. Rodgers.

Perpetual Fee—Forty Guineas, qualifying for all Medical Boards of Examination.

Further particulars respecting the School may be obtained on application at the Theatre, 1, Grosvenor Place; or to the Honorary Secretary, Dr. V. W. Pettigrew, 30, Chester Street, and at the residences of the different Lecturers.

W MEDICAL, SURGICAL, AND SCIENTIFIC WORKS.

r. A. Von BÄHR'S HANDBOOK of HUMAN ANATOMY. Translated lapted to the use of English Students. By J. Birkett, F.R.C.S. 16mo. [*In October.*

II.

:. J. MILMAN COLEY'S PRACTICAL TREATISE on the DISEASES IILDREN. 8vo. 14s.

III.

r. GEORGE BURROWS On DISORDERS of the CEREBRAL CIRCU-ON, &c. 8vo. with coloured Plates, 10s. 6d.

IV.

r. W. P. ORMEROD'S CLINICAL COLLECTIONS and OBSERVA-IS in SURGERY. 8vo. 10s. 6d.

V.

r. JAMES ESDAILE On MESMERISM in INDIA, and its Practical ication in Surgery and Medicine. Fcp. 8vo. 6s. 6d.

VI.

r. E. A. PARKES'S REMARKS on the DYSENTERY and HEPATITIS IDIA. 8vo. 9s.

VII.

r. W. FERGUSSON'S (late of Windsor) NOTES and RECOLLECTIONS PROFESSIONAL LIFE. Edited by the Author's Son. 8vo. 7s. 6d.

VIII.

r. P. M. LATHAM'S LECTURES on Subjects connected with CLINICAL ICINE; comprising Diseases of the Heart. Vol. II. 12mo. [*In the press.*

IX.

r. R. DUNDAS THOMSON'S EXPERIMENTAL RESEARCHES on OOD of ANIMALS: with Remarks on the Food of Man. Fcp. 8vo. 5s.

X.

r. H. M. HUGHES'S CLINICAL INTRODUCTION to the Practice of CULTATION. Fcp. 8vo. 6s.

XI.

r. T. PRIDGIN TEALE'S TREATISE on ABDOMINAL HERNIA. with numerous Illustrations, 15s.

XII.

r. JON. PEREIRA'S ELEMENTS of MATERIA MEDICA. A New on, thoroughly revised. [*In the press.*

XIII.

rofessor R. OWEN'S LECTURES on the COMPARATIVE ANATOMY PHYSIOLOGY of the VERTEBRATE ANIMALS. 8vo. [*In the press.*

XIV.

r. S. SOLLY On the HUMAN BRAIN: its Structure and Diseases. Edition. [*In the press.*

XV.

ir B. C. BRODIE'S LECTURES illustrative of various Subjects in logy and Surgery. 8vo. 12s.

XVI.

r. GEORGE MOORE On the USE of the BODY in relation to the Mind. 8vo. 9s.

XVII.

ESCHEL'S ELEMENTS of PHYSICS. Translated, with Notes, by West. 3 vols. fcp. 8vo. with Woodcuts, 21s.

Separately:—Part 1, Ponderable Bodies, 7s. 6d.; Part 2, Imponderable Bodies, 2 vols. 13s. 6d.

XVIII.

Baron HUMBOLDT'S COSMOS. Translated, with the Author's sanction co-operation, by Lieut.-Col. E. Sabine, F.R.S. Vol. I. Post 8vo. 12s.

London: Longman, Brown, Green, and Longmans.

NEW EDITION OF

LIEBIG'S ANIMAL CHEMISTRY.

On the 15th of October will be published, in 8vo. Part I. (the first half of the work) of the Third Edition, almost re-written.

LONDON: TAYLOR AND WALTON, 28, UPPER GOWER STREET.

WAGNER'S COMPARATIVE ANATOMY.

Just published, 8vo. 9s. cloth,

ELEMENTS of the COMPARATIVE ANATOMY of the VERTEBRATE ANIMALS. Designed especially for the use of Students. By RUDOLPH WAGNER, M.D. Professor of Comparative Anatomy and Physiology in the University of Göttingen, &c. Edited from the German by ALFRED TULK, M.R.C.S.

"This valuable work will form a good manual for students of comparative anatomy."

JAMESON'S PHILOSOPHICAL JOURNAL.

Longman, Brown, Green, and Longmans.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL or ASYLUM. Weekly Board, September 28th, 1846.—Wanted, in consequence of the appointment of Mr. Bowring to the office of House-Surgeon, a CLERK to the Physicians. Each candidate must be unmarried, and a Licentiate of the Society of Apothecaries. The gentleman who may be elected will be required to remain in the situation for a term of not less than three years; to reside in the house; and devote the whole of his time to the duties of the office. Salary, 40 guineas per annum, with board and lodging. Letters from candidates, with testimonials, must be sent, free of charge, on or before Saturday, the 10th of October next, to the Secretary, at the Infirmary.

By order of the Weekly Board,
JOSHUA RADFORD, Sec.

MR. E. E. BARRON continues to give Courses of MEDICAL and SURGICAL TUITION adapted to gentlemen preparing for Professional Examinations, at his Class Room, 16, St. Thomas' Street East, Borough.

Mr. Barron also receives one or two gentlemen as House-Pupils. Residence, 15, St. Thomas' Street, Borough.

ST. GEORGE'S HOSPITAL.—The Senior Physician will commence a Series of Twelve Clinical Discourses on the Symptoms, Principles, and Treatment of DISEASE, on Tuesday, October 6, punctually at a quarter before 4 o'clock in the afternoon. These Lectures are open to all students, governors, and professional friends of the Hospital.

MR. BOWER, Private Teacher of Anatomy, Surgery, &c. (formerly of King's College), continues to give Instruction to Students preparing for the College of Surgeons, Apothecaries' Hall, or any of the different Medical Boards.

Fee for attendance on any one of the Classes till qualified for examination, £5. 5s.

Mr. Bower has a vacancy for one Resident Pupil.

For further particulars, enquire at Mr. Bower's residence, 95, Hatton Garden.

ROBINSON ON THE TEETH.

Just published, with 139 Engravings, price 10s.

THE SURGICAL, MECHANICAL, and MEDICAL TREATMENT of the TEETH; including a complete Treatise on Dental Mechanism. By JAMES ROBINSON, Surgeon-Dentist to the Metropolitan Hospital, &c. &c.

W. Webster, 60, Piccadilly, London; Lindsay and Blakiston, Philadelphia, U.S.

This day, 8vo. with plates, 13s. cloth lettered,

GUY'S HOSPITAL REPORTS.
Volume 4.—New Series.
Being the Volume for the year 1846.

To be continued in Yearly Volumes, published in October.

S. Highley, 32, Fleet Street.

SCHOOL of PHYSIC in IRELAND.

The Professors will commence their Lectures and Hospital Attendance on Monday, the 2d of November.

At Twelve o'clock, Sir Patrick Dun's Hospital will be visited by the Clinical Lecturers Dr. Law and Dr. Ferguson, who will deliver Clinical Lectures twice in each week.

Lectures will be delivered—

At 10 by Dr. Law, on the Institutes of Medicine.
11 .. Dr. Osborne, on Materia Medica and Pharmacy.
1 .. Dr. Harrison, on Anatomy and Surgery.
2 .. Dr. Barker, on Chemistry.
3 .. Dr. Ferguson, on the Practice of Medicine.
4 .. Dr. Montgomery, on Midwifery and the Diseases of Women and Children.
3 .. Dr. Brady, on Medical Jurisprudence, on Fridays and Saturdays.

Dr. G. Allman's Lectures on Botany, with Demonstrations, will commence on the last week, or last but one, of April, and end before the middle of July.

In compliance with a regulation of the Board of Trinity College, the Clinical Lectures at Sir Patrick Dunn's Hospital will be continued during the months of May, June, and July, by the Clinical Lecturers for the year.

Demonstrations at the Anatomical Theatre are delivered by Drs. Hatchell and Charles Croker King.

Demonstrations on Practical Chemistry, at the Chemical Laboratory, by the Professor and Dr. William Barker.

The Medical Library at Sir Patrick Dun's Hospital is open on Tuesdays and Fridays, at 3 o'clock, for the delivery of books to students, conformably with the regulations of the College of Physicians.

All the Lectures (the Clinical Lectures excepted) will be delivered in the Medical Lecture Rooms of Trinity College.

N.B. By order of the Board of Trinity College, and the College of Physicians, no student will be permitted, after the 25th of November, to enter for any of the Winter Courses of Lectures.

JONATHAN LABATT, M.D., Registrar,
King and Queen's College of Physicians in Ireland.

Lectures.

A COURSE OF LECTURE ON MEDICAL JURISPRUDENCE,

By Alfred S. Taylor, F.R.S.

Delivered at Guy's Hospital.

Lecture X.

Presumption of Survivorship—*remotely connected with the subject of medical jurisprudence—survivance after severe wounds and from poisons—presumption of death from long absence—in cases of life-insurance—presumption of survivorship among persons of different ages and sexes—case of General Stanevix—legal decisions and rules of law—American case—principles of the Roman law—medical assumptions—survivorship of mother and child during delivery—of husband and wife—medico-legal questions connected with* age *in the living—period for the development of virile power—disappearance of the procreative power in males and females through age—Banbury peerage case—appearance of the menstrual function in females—age for pregnancy—precocious puberty—legal relations of the subject.* Minority.

There are various presumptions in law upon which it is supposed medical evidence is capable of throwing light, so as to give something like certainty to judicial decisions. I think, however, we shall find as we go into the consideration of this subject, that the evidence of medical witnesses can be of little avail in these cases; and although the presumption of survivorship has been held to be a part of medical jurisprudence, our judges are in the habit of deciding such questions rather from the general circumstances attending each case, than from the opinions of medical men.

In many parts of our subject, questions connected with survivorship will incidentally arise. Thus a question may be put to you, whether, and for how long a period, a person could survive a severe wound to the head, heart, or any other vital organ. You may also be required to give an opinion as to the period which a person may have survived after taking a certain dose of some active poison,—as to the time within which death from drowning, hanging, or suffocation, may take place under particular conditions. All these are questions which will properly require consideration in speaking of each form of violent death:—the presumption is for the most part purely medical, and must be decided by medical experience.

The law, however, goes a step further than this; for it is sometimes compelled to presume that a person who has been long absent is dead, or that of two or more persons who have died under the same circumstances, and from the same common calamity, one died before the other.

The question of the *presumption of death* from *long absence* is purely legal; and the principle of our law appears to be this. If a party has not been heard of for seven years, the presumption of his being alive continues during that period; and the burden of proof lies upon those who attempt to set up his alleged death. But after that period, another presumption arises, namely the death of the party at or from the time he was last heard of; and the proof of his being alive must be shewn by those whose interest it is to sustain that fact. A singular case involving a question of this kind lately came before the Court of Chancery,—I allude to that of *Watson* v. *England*, in which a presumption arose that a female who had left her father's house in 1810, and had not been heard of since that year, was dead. No decision was come to, the Vice-Chancellor observing, from the uncertainty in the evidence, that if he presumed her death, the woman might walk into the Court and disprove all. Such cases can only be elucidated by medical evidence, when it is proved that the missing party was labouring under some serious disease, likely to prove fatal, for which he may have received medical advice; an opinion might then be required as to the degree to which the disease had advanced, and the probability of its causing death within a certain period. No general rules can here be laid down for your guidance; every case must rest upon the circumstances which accompany it.

A presumption of death may arise in a question of life insurance; as when, for instance, the amount of a policy is made payable on the death of a person. He may have sailed in a ship which has not been heard of for many years; and from circumstances it may appear to have been overtaken by a storm in which other ships had perished. In such cases, payment is commonly made under a deed of indemnity. If the case be disputed, the presumption of death is left as a question for the jury. A verdict was returned for the plaintiffs in an action to recover a sum insured on the life of Mr. Macleane, the evidence being, that about the 28th November, 1777, the insured sailed from the Cape in a small sloop, and was never heard of afterwards. Several vessels of stronger build sailed at the same time, and they encountered a violent storm in January 1778, in which it was supposed the sloop was lost. It is clear that unless a presumption of death were allowed in such cases, great injustice would be done to the representatives of persons who had insured their lives.

Let us, however, take the case that several persons have perished together from some common cause; it may be very material to determine which probably survived the other, since property may be claimed by different heirs through the several deceased persons. According to the civil law, when the parties perishing together were parent and child, the latter, if under the age of puberty, was presumed to have died first, but if above that age, the rule was reversed. In the case of husband and wife, the presumption was in favour of the survivorship of the husband. These presumptions were based on the assumption, that the party deemed to have survived, was by his superior strength and vigour likely to have struggled longest against the common death. The law of France is in some measure based upon these provisions; but in England there is no decided rule on the subject. The question of which of two parties survived the longest is left to be determined by a jury or ecclesiastical judge, according to the facts proved; such as the comparative age, strength, and danger, to which they were respectively exposed, and any other circumstance calculated to throw light upon it. It has, however, happened on several occasions, that there have been no such indicia, and the case has then generally terminated in a compromise of the suit. There is a well-known instance, which is referred to by most medico-legal writers, that of General Stanwix, in which the general, with his second wife and daughter by a former marriage, sailed in a vessel from Dublin to England. The ship with all on board was lost at sea, and no account of the manner of her perishing was ever received. Several suits arose out of this case. The maternal uncle of the daughter claimed the effects of the general, under the principles of the civil law. This case was not decided: the suit was compromised on the recommendation of Lord Mansfield, who said he knew of no legal principle on which he could decide it. In another case, Sir W. Wynne, an eminent judge, said, that in his judgment the most rational presumption was that all died together; and that none could transmit rights to another. In a third, where husband and wife were drowned, and a strong claim was made by the wife's relations, Sir J. Nicholl said he assumed that they both perished at the same moment; and he therefore granted administration to the representative of the husband, *as the person in* whom the property really *vested at the time of* the decease of both. *He, however, expressly* observed that in giving this judgment, he was not deciding that the husband survived the wife.

In a still more recent case, where property was vested in the wife, and she and her husband were drowned together without any of the circumstances being known, on a claim to the property being made by the husband's heirs, on the ground of his survivorship, Sir Herbert Jenner decided according to the principle that where a party dies possessed of property, the right to that property passes to his next of kin, unless it be shown to have passed to another by survivorship. Here the next of the kin of the husband claimed the property which was vested in his wife—that claim must therefore be made out: it must be shown that the husband survived. In the absence of evidence the parties must be presumed to have died at the same time, and the property therefore remains where it is found to be vested, unless there be evidence to show that it has been divested.

Some years ago the following case was referred to me for a medical opinion,—whether it was likely, in the drowning of persons of different ages and sexes, in a confined apartment (the cabin of a vessel), that one should have survived the other.

An officer in the army died in November 1819, leaving a wife and two daughters, bequeathing property between them. In 1823, the widow married again, and by this second marriage she had several children, all of whom died,—the property having been previously to the marriage settled on the wife. One of the daughters, Margaret, died in 1825, before majority,—intestate, and leaving only as next of kin her sister Johanna, and the said mother and widow.

In 1834, the mother, her daughter Johanna, and her son, the last surviving child of the marriage between her and her second husband, were drowned on the coast of Norfolk, in the cabin of a sailing packet, while on their way to Scotland. The vessel filled with water from the sky-lights of the cabin during a storm. A few minutes before the catastrophe, all in the cabin were seen and spoken to, but not one of them was heard to speak or was seen alive after the cabin had become filled with water, which is said to have happened instantaneously. The deaths of the mother, daughter, and son, were supposed to have taken place at one and the same instant of time,—at least it cannot be proved by the direct testimony of any person that he saw any one of the three alive, or that he heard the cry or speech of any one of these three, after the death of the other or either of them. It may be mentioned that the mother was corpulent, and, by the ill treatment of her husband, a broken-hearted woman, about forty-two years of age;—the daughter was a stout healthy girl about twenty, and the son about six years of age. Physical and constitutional strength were thus decidedly in favour of the survivorship of the daughter Johanna.

The said Johanna was in right of considerable funds at the time of her death, and she died intestate. A claim was made for her property by her nearest blood-relation, her paternal uncle german. Her mother's second husband being still alive, claimed the property, as the representative of his said wife, or his said son, presuming that Johanna died before them, and that her property became vested in them.

The opinion of Dr. Lushington being requested on this case, he stated that, as to the question of survivorship, the presumption of law, in the absence of evidence to the contrary, was that the mother, daughter, and son, all died at the same moment. The consequence would be, that none of the parties could transmit to the other. The paternal uncle would therefore be entitled to Johanna's property, on the principle already applied in so many cases,—that the property being vested in her, those who desire to take it on a presumption, must produce evidence to show that she died before those persons through whom they set up a claim.

In this case there did not appear to me to be the least ground, medically speaking, for assuming that one of these persons survived the other. There was no evidence as to whether they were in different parts of the cabin, or whether the water reached one before the other; and in the absence of all facts of this kind, it would be a mere arbitrary assumption to assign survivorship to one.

It has been supposed that when males and females, and the young and aged, are placed in exactly similar circumstances with regard to impending danger, that a male or adult would survive: but on what principle can such an inference be drawn, when many inappreciable circumstances may have really led to the prior death of the male adult? A very curious case was lately decided in America, calculated to show that a fixed arbitrary principle like that of the Roman law with regard to the death of husband and wife must operate unjustly. A man and his wife were on board a steam-vessel when the boiler exploded; the vessel parted in the centre, and the greater number on board perished. From the evidence of several witnesses it was proved that the wife escaped the explosion; but nothing was seen of the husband afterwards, nor for some time before, and the explosion produced the most serious effects in that part of the vessel which formed the gentlemen's cabin. From these and other circumstances the judge decided in favour of the *survivorship of the wife, and the decision was confirmed on appeal. The case is the more remarkable,* inasmuch as the onus of proof lay entirely upon those who claimed through the wife, the property being actually vested in the husband. The strongest argument on the other side, *i. e.* in favour of the survivorship of the husband, was that no human testimony could fix the time of his death, while that of his wife was rendered almost certain. It was considered, however, that the claimants had brought sufficient proofs to establish a presumption of survivorship in favour of the wife. Most of the decisions run the other way; but then there has been an entire absence of circumstances to guide the court.

There is no doubt that the rules which influence English courts on these occasions are the most equitable. A right to property once acquired should not be taken away upon a mere *presumption;* the right may be averted by the production of satisfactory evidence, medical or general, but until this is brought forward the property should be considered to be vested in the holder and his heirs. Presumptions founded on age, sex, or the relative strength of parties, are rather to be regarded as *assumptions*, inadmissible except when most strongly supported by circumstances.

The day is past when probabilities will be received for proofs in English law; and it is therefore unnecessary to bring before you the rules which have been laid down by some medico-legal writers, when persons perish by a common cause, as by fire, starvations suffocation, or cold. M. Devergie asserts that a female will survive a male adult in suffocation from carbonic acid; but a sufficient number of cases has not been observed to allow a fair inference on this point to be drawn; and very strong evidence would be required by an English judge to satisfy him that such an opinion was universally correct. As little can it be presumed that the young perish from suffocation before the old. All these events can only be treated as circumstances from their nature unascertainable, and therefore dealt with according to legal and not according to medical rules. There are probably no two cases of death from a common cause in which all the circumstances will be alike; hence any general medical rule for assigning survivorship to one over the other, is perfectly inapplicable.

There has been much ingenious discussion as to the survivorship of the mother or child, when both die during delivery, and nothing is known respecting their deaths. So far as I am aware this question has only occurred once in an old case, quoted by Dr. Beck; and then some local German court arbitrarily decided that the child survived the mother, basing its decision, according to Valentin, upon the grounds—1. that the mother was exhausted by the labour, and, 2. that the infant would not have died, until deprived the death of the mother of its nourishment. Now it is quite possible that the child might have died soon after its birth, and the mother have survived :—at any rate the medical reasons for this view, are just as good and just as forcible as those against it, and the only equitable mode of dealing with such cases, when a legal question of a right to property is dependent on the decision, is to treat them according to the principles followed in contested survivorship. Those who would benefit by the presumption that the child survived the mother, should be required to adduce satisfactory proofs.

In some cases of presumed survivorship medical evidence may be of service,—as where two persons are found dead from wounds affecting different parts, and these wounds are of different degrees of severity,—or where two are found dead from any cause, and the body of the one is cold and rigid, while that of the other is warm and pliant: here we have medical facts which may serve to guide the court, and enable it to come to a correct decision.

In one case, where husband and wife were found dead, both severely wounded and the bodies burnt, Dr. Ollivier remarked that the burns on the body of the wife had the characters of those which are produced during life, while those on the body of the husband were exactly like burns which are caused after death. He thence inferred, as they were exposed to the same cause of burning, that the wife survived the husband; for he considered that all signs of vitality must have ceased in him before the fire could have reached his body.

AGE IN THE LIVING.

The subject of age in the living has very little reference to the duties of a medical jurist. The age of a *living* person is easily ascertained, for all legal purposes, by the production of a certificate of baptism, or of a certificate of birth from the district registrar. Except in those cases where strict legal proof is demanded, the age of a person might be determined at once by the oral testimony of relatives or friends. A court of law would take this evidence in preference to that of a medical man, based as it must be, in the young, on the average periods at which the teeth appear, and in the old upon mere conjecture.

Certain physiological questions connected with age may occasionally come before a medical practitioner,—as, for instance, he may be required to say what is the age at which the power of procreation appears and disappears in the sexes.

Virile power.—Thus it may happen that *a person is so young* as to render it *impossible that he should* be the father of a child *imputed to him.* Cases involving questions of legitimacy on this ground, are not heard of in the present day; but in ancient law-books, according to Professor Amos, there are decisions relative to the illegitimacy of children, born during marriage, because the alleged fathers were seven, six, and even three years old. The exact age at which the sexual function appears in the male differs in different individuals;—it is usual to say, that it does not exist until after the age of puberty (14), but this state does not always occur at the same period; it may appear earlier, or much later. A question relative to the power of individuals at this early age, may be put to a medical witness in reference to the affiliation of children. The following case was referred to me in 1840. A woman wished to affiliate a child on a youth who was in his sixteenth year. The boy denied that he was the father of the child; and there was reason to suspect that the imputation had been wrongly thrown upon him, in order to divert suspicion from the real party. There was some difficulty in the case; but it appears to me that the rule for you to follow on these occasions is this:—not to regard the mere age of the youth, whether he be above or below the average age of puberty, but to observe whether the sexual organs be fully developed, and whether there be about him any of the ordinary marks of virility, indicated by muscular development, the growth of a beard, and a change in the voice. If these signs be present, whatever may be his age, there is strong reason to suppose that the sexual functions are developed. We occasionally hear of instances of extraordinary precocity; but the development of the sexual power is generally accompanied by other well-marked changes in the individual, although these may not be observed in many cases until after the age of twenty-one.

On the other hand, it may be a question respecting the age at which the procreative power disappears in the *male*. That impotency is one of the natural consequences of advanced age, is undoubted; but this, as we know, forms no legal impediment to the marriage of parties however old. The legal presumption is, that the generative faculty does not disappear through age; and if this be alleged, and legitimacy disputed on this ground, it must be satisfactorily proved by those who would benefit by such an allegation. This amounts almost to an impossibility; because it is well known that there is no particular age at which the sexual functions disappear either in the male or female; and individuals of the male sex who have passed the ages of sixty, seventy, and even ninety years, have been known to be prolific. Dr. Rüttel mentions a case where a man at ninety-two married, and had two children by his wife. Even where the procreative power may be lost among men from seventy to seventy-five years of age, a strong sexual stimulus often remains. This has been known to exist up to eighty-four years of age. It is worthy of remark, that while the sexual functions are developed in the male later in life, they are commonly observed to continue to a greater age than in the female. In relation to this question, it may be mentioned as an interesting physiological fact, that Mr. Curling found spermatozoa in the liquid taken from the testicles of a man upwards of seventy years of age, and on one occasion in the testicles of a man aged eighty-seven. The presence of these is presumed to indicate the existence of a prolific power, but I have heard of their being found in the secretion of young subjects.

The English law on the subject of alleged impotency from old age was clearly laid down in the *Banbury peerage case*, brought before the House of Lords many years since. Lord and Lady Banbury had been married twenty-one years without having had issue, when his lordship died at the age of eighty years. The peerage was claimed by an individual who called himself the son of Lord Banbury; but, in fact, it was alleged that he was the son of Lady Banbury by an adulterer, during her husband's life. According to the evidence, Lord Banbury did not appear to be aware of his existence; and the child had always been known by another name. One of the grounds upon which the legitimacy of the descent of the claimant was contested, was, that the deceased nobleman was impotent through age; but it was then stated on good legal authority that the law put no limit on the powers and faculties of man. The assumed impotency of the alleged parent on the ground of age, could never be admitted as a proof of the illegitimacy of the supposed offspring. The House decided against the claim, but not on the ground of impotency from age in the supposed parent.

In the *female*, the procreative power is supposed not to exist until after the commencement of menstruation, and to cease upon the cessation of this periodical secretion. The menstrual function is commonly established in females in this climate between the ages of fourteen and sixteen; but it may occur much earlier; indeed, in some rare instances, a discharge resembling the menstrual has been known to occur in mere infants;—or its appearance may be protracted to a much later period.

According to Dr. Rüttel, the menstrual function appears in the smallest number of females at 12, 13, and 14 years, and in the largest number at 16, 17, and 18. *In many it is only first established at from 19 to 21 years; and he states that at this age he has* often found the uterus very small, and quite undeveloped. It is important to remember, that these changes in the uterus may produce remarkable effects by sympathy with the brain and nervous system. At or about this period, more especially if any cause of obstruction exist, females become irritable, easily excited, and often perpetrate crimes of great enormity, such as murder and arson, without motive. A propensity to steal also sometimes manifests itself. It has been remarked that acts of arson have been often committed by young girls at this period of life, and the crime has spread by imitation. The case of Brixey, tried last year for the murder of an infant, and acquitted on the ground of insanity, will serve as another illustration of the morbid effect produced on the brain by disordered menstruation. The state of the mind should be therefore carefully watched at this period of life. Chlorosis may give rise to temporary insanity. Puberty in the male may be attended with similar morbid propensities, but these are not so commonly witnessed in the male as in the female.

The occurrence of menstruation is not indispensable to pregnancy. Several cases are on record, where women who had never menstruated have conceived and borne children. A case was lately reported in a medical periodical, in which a female aged 25 became pregnant and bore a child, and menstruation was only regularly established afterwards. Instances of premature puberty in the female are now so numerous, that it is unnecessary to occupy your time with the details. Dr. Beck mentions a case where a female menstruated at one year, and became pregnant and was delivered of a child when a little more than ten years old. Dr. Rüttel met with a case where a female of the age of fourteen became pregnant by a boy of the same age; and he refers to three others, where one girl of the age of nine, and two of the age of thirteen, became pregnant.

Is it possible for a female to become pregnant after menstruation has ceased? It is commonly asserted and believed that, under these circumstances, a woman becomes sterile. This is doubtless the general rule. As medical jurists, we must, however, take notice of exceptions. Mr. Pearson, of Staleybridge, communicated to the Lancet some years ago, the case of a lady, aged 44, who, up to September 1836, had given birth to nine children. After this the catamenia appeared only slightly at the regular periods until July 1838, when they entirely ceased. Owing to this she supposed that she was not liable to become pregnant; but on the 31st December, 1839, therefore eighteen months after the entire cessation of the menses, she was delivered of her tenth child. Hence conception must have taken place at from eight to nine months after the final cessation of the discharge. Numerous instances are on record of females advanced in life bearing children. A case is reported by Schmidt, in which a well-formed female, who was married at the age of nineteen, did not bear a child until she had reached the age of fifty. Rüttell observed in twelve women, that they bore the last child at ages varying from forty-five to fifty. Ottinger met with an instance of a female bearing a child at fifty. Cederschjald another, where the woman was fifty-three, and menstruation still continued. Nevermann has drawn up a table in reference to the late ages in life at which women have borne children. Out of 1000 cases in 10,000 births, he found that 436 children were borne by females at the ages respectively—

Of 41 years	101
42	113
43	70
44	58
45	43
46	12
47	13
48	8
49	6
50	9
52	1
53	1
54	1

We cannot pretend to define the age at which pregnancy ceases to be possible, and beyond which it cannot occur. Questions of this kind have a very important bearing on the subject of legitimacy; and unless the law looks to something more than ordinary experience in such matters, the decisions of courts may be inequitable. The legitimacy of the claimant ot the Douglas peerage, about the middle of the last century, was contested, among other grounds, on the presumed loss of procreative power in the female said to be the mother, who must have been *fifty* years of age at the time of the alleged birth. The fallacy of trusting to a ground of this kind as evidence of illegitimacy, is proved by a reference to the cases already quoted. The truth is, the law is bound to look to the anomalies connected with the generative function, and therefore the limited experience of a few witnesses, casually taken, can hardly be expected to supply satisfactory answers to questions of this kind. It establishes no presumptions respecting the presence or absence of this power at any period of life; and it therefore leaves each case to rest upon the whole of the circumstances which attend it.

Minority.—The word *minor* is synonymous *with that of infant*, and is applied in *law to any one* under the age of fourteen *years. The age of* a person may render him incompetent to the performance of certain civil duties. Minors are frequently called upon to act as witnesses in civil and criminal cases. In rapes committed upon young females, it is especially important to notice whether the prosecutrix be or be not competent to give evidence. The law has fixed no age for testimonial competency; and I have never heard of the question being referred to a medical practitioner. The child is always orally examined by the court; and it is soon rendered apparent by her answers whether the witness possesses a proper knowledge of the nature and obligations of an oath. If not, the trial is postponed, and the child is placed under instruction, to appear again at the following sessions or assizes. The competency of a child as a witness, therefore, does not depend on age, but upon its understanding.

According to the principles of our law, a male at 12 may take the oath of allegiance; at 14 he is considered to be at years of discretion, and becomes then responsible for his actions; at 17 he may be made an executor; at 21 he attains majority, and is at his own disposal, and may alienate his lands, goods, and chattels, by deed or will. It is only when this age has been attained that an individual can be sworn to serve on a jury. The period at which a male is considered to have attained full age varies in some countries: thus in the kingdom of Naples it is fixed at 18 years; in Holland at 25; but generally throughout the states of Europe the law prescribes 21 years, the same as the common law of England.

FURTHER RESEARCHES ON THE
COMPOSITION OF THE BLOOD IN THE CONDITION OF HEALTH AND OF DISEASE.

By MM. A. Becquerel and A. Rodier.*

[Continued from p. 451.]

Qualities and composition of the blood and of the serum in plethora—in continued fever—in the phlegmasiæ. Nature and cause of the buffy coat; explanations which have been offered concerning it—the serum in bronchitis—in pleuropneumonia—in pleurisy—in rheumatism—in peritonitis—in angina tonsillaris. Conclusions respecting the composition and qualities of the serum in the phlegmasiæ; cause of the buffy coat.

Plethora. — It was mentioned by the authors in their former researches,† that in a plethoric state of the system the composi-

---

* Translated from the *Gazette Médicale de Paris.*

† Ibid. Nos. 47, et seq. 1844.

on of the blood differs in no essential
spect from that presented by it in health,
od that the only peculiarity of this fluid
onsists in its actual bulk being relatively
reater in plethora than in the ordinary con-
ition of health. Further observations have
ot led them to alter this opinion. The
omposition of the serum in the state of
lethora has especially occupied their atten-
ion in the present researches. This fluid
as been examined in seven cases, in which
he individuals (six of whom were males, and
ne a female) presented all the characters of
lethora in a well-marked degree, and were
trong, robust, of a good constitution, and
ee from other disease. On analysing the
erum obtained from the blood of these in-
ividuals, it was found to present characters
ompletely identical with those of the serum
n an ordinary state of health. Its mean
ensity was 1028·4, and the extreme degrees
bove and below this sum were very small.
ts quantity was small compared with that
f the clot. It was of a rather deep colour,
ot perfectly transparent, and possessed a
olerable consistence. Analysis of 1000
arts furnished, on the average, 908·3 parts
f water, and 91·7 parts of solid consti-
uents: numbers which shew a slight in-
rease in the proportion of solid ingredients
eyond that of health; this increase was
specially on the part of the albumen, the
roportions of the extractive and fatty prin-
iples, and of the free salts, being exactly
hose found in health.

Continued fever.—Simple continued fever,
hich consists in a general febrile derange-
ent of the system, with lassitude, headache,
c. but without any local determination, is
ometimes sufficiently severe to lead to the
mployment of venesection, which almost
nvariably relieves the symptoms. In cases
f this description the serum has been exa-
ined in seven individuals (five males and
wo females), all of whom were of good con-
titution. In each of these cases, the serum,
ithout being exactly analogous to that of
ealth, did not sensibly differ from it. In
hree individuals, in whom the fever was
light and of short duration, and who had
ot been obliged to adopt an abstemious
iet, the serum presented all the characters
nd the composition observed in health. In
he other four cases, however, in which the
ever was more severe, and a rigorous diet
ad been enjoined, the density of the serum
as diminished, so that on an average it
ccupied the lowest limit of health, viz.
026·3: the colour also was lighter than in
ealth. On analysing the serum in these
our cases, 1000 parts furnished a larger
roportion of water than natural, and con-
equently a smaller proportion *of solid con-*
tituents; the proportion of the latter in
e four cases was expressed by the numbers 81·7, 86·4, 88·8, 88·6: the mean being 85·8, a quantity considerably below the average of health (which is 90·3). Further analysis shewed that this diminution was especially at the expense of the albumen; for in three of the cases the quantities of albumen in 1000 parts of serum were 73·2, 76·1, 78·3 (mean 76·7,—80 being the mean of health): of free salts, extractive matters, and fat, the quantities were 8·5, 10·3, and 8·5; 6·7 was the mean quantity of extractive matter and salts, 2·4 of the fatty principles. On taking into account the good constitutions of these four individuals, the existence of fever, which, owing to the increased temperature of the body, would probably tend to diminish rather than to augment the proportion of water in the blood, and lastly, the influence of the disease on the system, which would be more marked because of its long continuance, and because of the patients having been for some time restricted to a low diet, one may conclude that, in simple continued fever, the diminution in the quantity of albumen in the serum, when proved to exist, is to be chiefly attributed to the abstemious diet on which the patients are placed.

[The analysis of two cases of rubeola were here inserted, but as they offered nothing peculiar they are omitted.]

Typhus.—Science is yet very far from having determined the exact alterations which the blood, and especially the serum, undergo in this disease. The analyses which have been hitherto made of this latter fluid having led to no general conclusion on the subject, it has been an especial object in the present researches to determine the modifications which it undergoes in this disease. For this purpose portions of serum from twenty-five bleedings, practised for this affection, have been examined. The patients who formed the subjects of these bleedings were 17 in number, 14 of whom were males, and 3 females; 2 of this number were attacked by the disease in a slight form, 12 others by a severe form, and the remaining 3 by a still more dangerous form. Of these 17 patients, 11 were bled once, 4 twice, and 2 three times, so that there were 17 first bleedings, 6 second bleedings, and 2 thirds. The analysis of the *first* seventeen bleedings showed as a general result that the density of the serum was decidedly diminished: its mean being 1026. In the patients who were lightly attacked, and before the disease had made much progress, the diminution in density was only slight. In the 11 others, however, who were in opposite conditions to the former, the diminution was much greater, and the density was represented by the numbers 1025, 1024, and 1023. The physical qualities of the serum have been carefully noted in sixteen of the bleedings.

Seven times the quantity of this fluid compared with that of the clot was large; in 4 of these it was limpid and transparent, twice a little turbid, and once mixed with globules. Of the remaining 9 bleedings, twice the serum presented nothing peculiar, three times it was small in quantity, limpid, and of a deep colour; and four times, lastly, it was equally small in quantity, and turbid. The colour, in these different cases, has varied; in general it was rather deep. Many times the fluid was very thick and viscous. It results, therefore, from what has been said, that it is not correct to state that in typhus the serum is always small in quantity, and mixed with globules, which the diffluence of a large clot allows to escape. On an average 1000 parts of the serum contained on analysis 914·5 parts of water, and consequently only 85·5 parts of solid constituents. This diminution in the quantity of solid ingredients was most marked in 12 of the cases, in 2 it was somewhat less, in 2 others the quantity was almost natural, whilst in 1 it was slightly above the healthy average. The cause of the increase in this latter case could not well be determined. The diminution observed was especially at the expense of the albumen; for the extractive matters, the free salts, and the fatty principles, were quite in their normal proportions. In each of the six *second* bleedings the density of the serum was decidedly less than it had been in the corresponding first bleedings: the average density in the two cases being as 1024·8 to 1026. The colour of the serum was also less deep than in the first bleedings; 3 times it was limpid, 3 times turbid. As might have been expected, the analyses of these six specimens of serum showed a marked diminution in the proportion of solid ingredients compared with the quantity of the same in the corresponding first bleedings; the ratio being as 81·1 to 87·2 parts in 1000. The proportion of water, therefore, was of course increased. The diminution here again was at the expense of the albumen; the other ingredients retaining their normal proportions. Of the two patients who were bled three times, the serum was comparatively large in quantity, limpid, and of a density still lower than that of the serum of the corresponding second bleedings: the proportion of water was still further increased, and that of the solid ingredients diminished. The conclusions which may be deduced from the above analyses, therefore, are: that in regard to its physical properties and chemical composition the serum of blood first drawn about *the commencement* of a slight attack of *typhus, presents* conditions very little different from those of health: it is more *common, however,* to find that either from the influence of low diet, or from the effect of the disease, the density of the fluid is diminished, the proportion of its water is increased, whilst that of its solid constituents, and especially of its albumen, is diminished. When a second bleeding is practised, it is observed that, either owing to the influence of the first abstraction, to the progress of the disease, or to the effect of diet, or probably to all these three causes combined, the serum has become more abundant and more aqueous; its density less, and the quantity of its solid constituents, especially of its albumen, decidedly diminished. Similar modifications are found to have taken place when the bleeding is practised a third time.

Phlegmasiæ. — Modern researches have shown that in the class of diseases to which the term phlegmasia is applied, a peculiar alteration takes place in the blood, which is constant, and is in direct proportion to the intensity of the disease itself. Whenever a phlegmasia is sufficiently well marked as to produce a febrile disturbance of the system, there is an increase in the quantity of fibrine contained in the blood; and this increase, which is a consequence of the phlegmasia, is developed, remains stationary, and diminishes, according as the disease itself does, but it never precedes it. This important truth, although long known, has been especially established by the analyses of Andral and Gavarret. The increase in the quantity of fibrine entails almost as a constant result the formation of the buffy coat or inflammatory crust on the surface of the clot. To what cause must the deposit of fibrine thus increased in quantity, on the upper part of the clot, be attributed? What is the mechanism of it, and what are the circumstances which produce it, and cause it to vary? These are questions which it is important should be clearly resolved and explained, for in general practice the aid of chemistry cannot conveniently be procured, yet the formation of the buffy coat is an important circumstance in guiding the medical man to the diagnosis and prognosis of disease. Among the explanations which have been offered to account for this phenomenon, the two principal ones may be noticed here. According to one, the formation of the buffy coat is attributed to the increase in the proportion of fibrine; an increase which may either be absolute or only relative, compared with the quantity of the globules. It is considered, moreover, that this new-formed fibrine having a tendency to coagulate with greater slowness than that has which exists naturally in the blood, the latter coagulates first, and enclosing within its meshes all the red corpuscles constitutes the red part of the clot, whilst the newly-formed fibrine is deposited more slowly, and only at the upper part of the red clot, where it forms the buff-coloured layer. According to the second theory it is supposed that in phlegmasiæ the red corpuscles tend to subside more rapidly than in any other disease, or than in health. This being the case, it may be easily conceived that during their subsidence the corpuscles can carry down with them a portion of the fibrine which then coagulates and forms the red part of the clot, whilst the upper portion of fibrine containing no red corpuscles coagulates into a yellowish-white or buff-coloured layer, and assumes by its subsequent retraction the well-known cupped appearance of the clot in these affections. To each of these theories, however, an objection of some weight may be offered. Of the partisans of the first one, it may be asked how it happens that in the majority of cases of chlorosis or of anæmia, in which there is no new formation of fibrine, a buffy coat which is sometimes as thick as the one in phlegmasiæ is formed on the clot. To those who admit the second explanation it may be observed, that if the globules subside more rapidly in phlegmasia, it must also be admitted that there is the same rapid subsidence in chlorosis and in other cases in which the buffy coat is formed. The results of analyses which will now be mentioned, and which bear on the serum in inflammation, will probably furnish some new materials for the study of this phenomenon.

To give only a brief summary of these analyses: 38 patients who were attacked with well-marked symptoms of phlegmasia, in a more or less intense degree, and in whose blood there was found an increased quantity of fibrine, were subjected to venæsection; 27 were bled but once, 9 were bled twice, and 2 three times; so that there were 38 first bleedings, 11 second bleedings, and 2 third ones, making in all 51. Of these 38 cases, 7 were cases of acute bronchitis, 11 of pleuro-pneumonia, 6 of pleurisy, 9 of acute rheumatism, 2 of erysipelas of the face, 2 of peritonitis, and 1 of angina tonsillaris: 24 of them occurred in males, and 14 in females. Of the first bleedings the density of the serum was generally found lowered, though less regularly so than in typhus, for example. It may be said, however, that as a rule it was found slightly diminished when the affection was slight and the bleeding practised early, whilst in cases where the affection was more severe and the patients already greatly debilitated, the density was considerably diminished. It has varied from 1028 to 1039, the average being 1026·5: this average, however, possesses no great value, owing to the great range which, as just mentioned, was observed. In quantity the serum was tolerably abundant; *it almost always separated* perfectly from the clot; was limpid, and sometimes clear, sometimes cloudy. On analysis there was found to be diminution in the quantity of solid ingredients in a proportion corresponding to the diminution in density. This diminution was entirely at the expense of the albumen, for the fatty and extractive principles, and the free salts, were even in somewhat larger proportions than usual. Of the second bleedings, the density of the serum, compared with that of the corresponding first bleedings, was still more lowered. In quantity this fluid was increased; it was clearer and more limpid. On analysis of 1000 parts, the mean quantity of solid matter was 81·7, instead of 86·6 obtained in the 11 corresponding first bleedings. The extractive and other matters were absent in the same proportions as in the first bleedings. In the two patients who were bled a third time, there was observed a still further diminution in the proportion of solid principles. A further analysis of these different cases, shewing the composition of the serum in the several affections, furnishes the following results:—

Acute bronchitis.—Of 7 individuals (4 men and 3 women), attacked with a slight form of this disease, the serum was slightly lowered in density. Corresponding to this the proportion of solid ingredients was slightly diminished, this diminution being especially at the expense of the albumen, for the extractive and other principles were in rather larger proportions than ordinary.

Pleuro-pneumonia.—In 11 cases the density of the serum in the first bleedings was more diminished than it was in the cases of bronchitis: this liquid was at the same time less abundant, of a deeper colour, and sometimes of considerable consistence. Might not these latter qualities be due to the increased quantity of fatty and extractive principles? The quantity of solid matters was considerably reduced, the proportion being much inferior to that of health: the albumen, of course, was the chief sufferer, for the other constituents were increased in quantity. Many of the severe cases of pleuro-pneumonia were bled a second time. The analysis of the serum in these cases shewed a still greater diminution in density, and in the proportion of solid ingredients, the mean quantity of the latter being 79 parts in 1000. Two of the patients were bled a third time; and in these the serum shewed a still further diminution in solid constituents, though the degree of diminution was less marked than between the first and second bleedings.

Acute pleurisy.—Of 6 individuals attacked with this disease, 2 had effusion which had lasted for three or four weeks; the serum of the blood in these two cases, unlike that found in the other forms of phlegmasiæ, possessed a density which was higher even than natural, and contained a corresponding increased quantity of solid constituents. In the four other cases the serum presented all the characters described above as peculiar to the phlegmasiæ. In six cases of *acute rheumatism*, two of *peritonitis*, and one of *angina tonsillaries*, similar modifications of the serum to those noticed above were found.

The general results of the above analyses will shew that in phlegmasiæ, besides the increase of fibrine which has been repeatedly before observed, there is an almost constant tendency on the part of the solid matters of the serum, especially of the albumen, to become diminished, and to entail as a consequence a lower specific gravity of the fluid than natural. At the same time, there is very frequently an increase in the quantity of extractive matters soluble in water, and of fatty principles. In slight affections, especially towards the commencement, or when the patient has continued taking food up to the beginning of the attack, the above mentioned phenomena are less marked, and the composition of the serum differs very little from that of health. In severe attacks, however, and when the patient has been confined to a low diet, the characters of the serum undergo a marked change from those of health; this fluid becomes more abundant and more aqueous; its density is diminished in a marked degree, and the quantity of its solid constituents becomes in like manner greatly reduced. This reduction is especially on the part of the albumen, the weight of the extractive and fatty principle remaining at the normal standard, or being rather above it. To these characters may be added in some cases a viscous condition and a deep colour of the serum. There are some exceptions to these conclusions, as was observed in the two cases of pleurisy. It must be remembered, however, that in these two exceptional cases the patients were not seriously attacked, and that they continued to take food. With regard to the cause of these modifications of the serum in phlegmasiæ it is almost impossible to speak with any amount of certainty, in the present state of science. Whether they are due to the lowness of diet, to the consequence of the disease, and of the disturbance which it effects in the system, to the increased heat of the body, whereby the secretions generally, and especially that of the urine, being diminished, a larger quantity of water than usual is retained in the system, or to the transformation of a portion of albumen into fibrine, are questions which cannot yet be answered.

It was stated above that probably some further light might be thrown, by the analysis of the serum in phlegmasiæ, on the mode of formation of the buffy coat on the surface of a clot. These analyses have shewn that in the phlegmasiæ the density of the serum is diminished. The blood-globules also are diminished; and there is, as is well known, an increase in the quantity of fibrine. These three facts being proved, may not the following explanation be admitted? In the phlegmasiæ, the subsidence of the blood corpuscles takes place more rapidly than in health, owing to the changes which the serum has undergone, and thus carry down with them a certain quantity of fibrine, which, owing to the same cause, has an equal tendency to subside The fibrine in this lower part then contracts, and forms, with the corpuscles, the red part of the clot, whilst the rest of the fibrine above, from which the red corpuscles have subsided, coagulates alone, forming at first a trembling, gelatinous-looking, greenish mass, which, gradually contracting, assumes a cupped appearance. [This explanation does not appear to differ in any essential respect from one already offered.]

Pulmonary tubercles.—In regard to the alterations undergone by the blood in this disease, much depends on the degree of development to which the tubercles have attained. In the first stage, when they have been only just deposited, the lesion may be quite local, and the constitution not have undergone any derangement, though sometimes, and especially in females, there is an anæmic condition, which, in some cases, precedes the deposition of tubercles, in others accompanies it. When hæmoptysis occurs at this stage the anæmia may become very marked. In the second stage, when the tubercles soften, or when the parenchyma of the lung surrounding them, or the bronchi or pleura, become inflamed, fever is superadded to the other conditions, and coincides with the anæmia which already exists, or which may be only developed at this period. In the third and last stage, when tuberculous cavities exist, and hectic fever and diarrhœa manifest themselves, the constitution becomes more and more exhausted. and anæmia, if it has not already appeared, is now almost invariably developed. In these different conditions analyses of the blood have not enabled the primary cause of tubercles to be discovered in this liquid; they have only shown that in each of the three stages above described certain modifications of the blood are usually found. These modifications, moreover, are capable of being reduced to two principal kinds, which may be combined and may present themselves in different degrees: these are, diminution in the quantity of globules when anæmia exists, and increase in the quantity of fibrine when any inflammatory affection happens to complicate the primary disease. These two alterations of the blood have been already proved; the present researches were undertaken to determine whether any other modifications of this fluid are undergone in this disease: whether there is any change in the proportions of the different elements of the serum. For this purpose the serum has been examined in sixteen phthisical patients (11 men and 5 women); 11 of these were bled only once, 2 twice, and 3 three times, which makes 24 bleedings in all, 16 of which were first bleedings, 5 were seconds, and 3 thirds. In each the venesection was practised on account either of hæmoptysis, or of a febrile attack, or of some casual inflammation. In 7 of the 16 first bleedings the density of the serum was diminished, its numbers ranging from 1026 to 1023. This latter number was observed in an individual whose urine did not contain any albumen. The analysis of 1000 grains of serum in these seven cases has shown a diminution in the quantity of solid constituents, the average proportion being 84 parts in 1000, the extremes 87 and 81 (the healthy average being 90). The physical characters of the serum presented nothing worthy of remark. Of these 7 cases 4 males were in the third stage of the disease, already much exhausted, and suffering from hectic; 2 males and 1 female were attacked with hæmoptysis. Of the remaining nine cases tubercles were present in different degrees of development. In each of these the density of the serum was diminished, and the proportional quantity of solid constituents reduced: this latter being especially at the expense of the albumen, for the relative proportion of extractive matters was increased. In the second bleedings each of the above characters was still further manifested, the density and proportion of solid constituents compared with the same in the corresponding first bleedings being diminished; the serum itself was almost always abundant and limpid. Similar remarks will apply to the third bleedings. From the above observations it will appear that in pulmonary phthisis the composition of the serum is modified according to the general condition of the patient, and the complications which may be engrafted on the original disease. Although this cannot be established as a general and absolute fact. on account of the variability of some of the results, yet it may be admitted that whenever any complication exists, when an anæmic condition is developed, or when abundant hæmoptyses occur, the solid constituents of the serum tend to diminish in quantity: the proportion of water increases and the density diminishes. The proportion of albumen is decidedly reduced, whilst that of extractive matters, fatty principles and free salts, *is increased. So that it appears* that the composition of the serum in pulmonary phthisis is closely analogous to that presented by this liquid in the different phlegmasiæ.

[To be continued.]

CASE OF A BLOOD-VESSEL COMMUNICATING WITH THE CAVITY OF AN ABSCESS. BY DR. A. M. ADAMS M.D. OF GLASGOW.

THE following case is related by Dr. Adams, as being in some measure parallel to a case of rupture of the internal jugular vein into an abscess, communicated by Dr. A. King to the London and Edinburgh Monthly Journal for March 1843, and as corroborating some of the views of Mr. Liston, as given in his paper on "A peculiar variety of False Aneurism," published with the Medico-Chirurgical Transactions.

The patient, a girl ætat. 15 months, had been attacked with scarlatina anginosa, which pursued a favourable course under the treatment. Seventeen days after the commencement of her illness she was brought to the writer, in consequence of a diffused, tense, and superficially inflamed swelling, situated behind and below the angle of the right jaw. At this period the throat internally showed no appearance of disease. As no fluctuation could be detected in the tumor, poultices were ordered, and directions given for the child to be brought again in a couple of days. The poultices were applied, but the mother neglected showing Dr. A. the child at the time appointed, wishing, as she said, that the healing should be quite ripe before it was lanced:" the consequence was, that the tumor burst into the throat, and the hæmorrhage which ensued was so great as speedily to prove fatal. The account given was, that the tumor had become much softer, and appeared to the friends sufficiently ready for opening, when the child suddenly gave issue to a large mouthful of scarlet-coloured blood, which continued to flow from the mouth, of the same colour, for the space of six or seven minutes. A considerable quantity of a darker coloured and coagulated blood was next vomited, making the quantity lost amount altogether, as nearly as the by-standers could guess, to about sixteen ounces. Shortly after this the child died the swelling on the side of the neck was found to have decreased considerably in size.

There appear to have been no post-mortem examination, and Dr. A. is undecided whether the blood proceeded from an artery or a vein. He considers this case to be an additional proof of the danger of allowing abscesses to remain for a long time (particularly in delicate children) pressing upon important vessels.—*London and Edinburgh Monthly Journal.*

Original Communications.

A CASE OF TRIPLETS*,

IN WHICH ONE CHILD WAS BORN ALIVE, WITH TWO FŒTUSES WHICH HAD LOST VITALITY FOR THREE PRECEDING MONTHS: WITH SOME REMARKS UPON THE PROBABLE CAUSE OF DEATH, &C.

By William Pretty, Esq.
Surgeon, London.

On April 26th, 1843, in the absence of my friend Mr. Goodhart, I was called to attend Mrs. S. in her first labour. She was a healthy young woman, 26 years of age, and had been married twelve months. Menstruation had ceased since the latter part of September (about the 26th), and it was computed that she had completed the seventh month of pregnancy. Sickness during the early months had been moderate, and during the last two months there had been a darkish-coloured watery discharge from the vagina; the patient herself designated it as like dirty water. Mrs. S. both before and after marriage suffered rather severely with dysmenorrhœa; and from the first month of pregnancy to the period of delivery she always experienced much abdominal tenderness, and was accustomed to get into bed upon her hands and knees as the easiest method. My patient came from the country, and was taken in labour prematurely without any exciting cause, as fatigue, fright, &c., whilst staying with her sister-in-law, who was likewise pregnant, and was confined a few days after at her full period. When I first visited Mrs. S. I found her in active labour, the pains good and regular; and as she had been ill fifteen or sixteen hours I thought it probable that the time of delivery was near at hand. The first thing I observed was a greater quantity of sanguineous discharge than is usual before delivery, accompanied with an exquisite degree of tenderness over the uterus: and upon internal examination with the finger I found a portion of placenta lying within a nearly fully dilated os uteri, and by its side some semi-solid moveable substances, covered with thin membrane, which I could not readily make out, but which might have been taken for hands and feet. There was no firm resisting part presenting, such as the head or nates of a child at seven months.

Fearing that an increase of hæmorrhage might render particular assistance necessary, I prepared myself for the introduction of the hand into the uterus. I judged it proper, in the first place, to attempt the removal of these moveable substances, and with two fingers introduced into the upper part of the vagina, I easily brought down the smallest fœtus, and snipped the umbilical cord. I examined again, and found something of a similar kind, having a thin loose membranous covering; this was easily torn, and I brought down in like manner a second small fœtus: the umbilical cord was cut through, and, like the first, required no ligature. The membranes contained no liquor amnii that I could or did ascertain. Another examination (the pains continuing regular), and I was soon made sensible of the approach of a large volume of distended membranes; after a few more pains they broke, and the head of a third child was felt, which child shortly came into the world, very much discoloured about the head and face (nearly black), and with just sufficient power weakly to cry, breathe, and exist for only three hours, notwithstanding some blood was allowed to escape from the divided umbilical cord. The presenting portion of placenta offered no impediment to the delivery, and a very inconsiderable amount of discharge followed. The uterus being pretty well contracted, and finding the vagina filled with placenta, I removed the contents, which consisted of two placentæ, a single and a double one, with three membranous sacs. The abdominal tenderness quickly subsided after delivery, and the patient had a good recovery. The larger placenta, which was in every respect healthy and natural, was left behind, but the double one, with the three fœtuses, I secured, and they are now in the possession of Mr. A. H. Goodhart. The general aspect of this double placenta is abnormal; it has lost its usual soft spongy texture, and has become firm, lobulated, and mixed up with a considerable quantity of fatty matter. It must, I think, have been partially and imperfectly attached to the uterus at the time labour commenced, as its uterine surface presented here and there some small spots of coagulated blood, indicating probably the parts so attached; yet its natural connection must have been gradually destroyed by the morbid action going on in the placenta, and which gave origin to the watery discharge occurring several months before delivery.

---

* Communicated by Dr. Merriman to the Royal *Medical and Chirurgical Society*.

The two small fœtuses were without fœtor, and resembled in colour others which have been preserved in spirit for several years. Their bodies were compressed from back to front, and their heads laterally, retaining the arched top. The thickness of the smaller a little exceeded a crown-piece, that of the larger somewhat more, having an upper extremity deeply embedded in its abdomen. They weighed respectively 4 ozs. and 7 ozs. avoird. The double placenta and membranes weighed 8¼ ozs. The child born alive weighed 3 lb. 8 ozs. and measured fifteen inches in length. They were all males.

The opinion of Dr. Merriman, which I suppose is considered as correct by accoucheurs, that death is in these cases the result of compression, seems to be consistent with the facts, so far as we can ascertain them. The altered condition of the placenta and the two fœtuses from their natural state, the retention of the same long after the circulation had been arrested, the vital principle extinguished in the latter, and the absence of all fœtor, would justify the supposition that the cause was that of slow compression.

If, however, it should be imagined that death is not solely produced in these instances by compression, in consequence of the gravid uterus having a power of enlarging or extending itself after the seventh month of pregnancy, coupled with the protection given to the fœtus by the liquor amnii, we can only refer it to some original defect in the ovum itself; but we must remember that there was here a discharge resembling dirty water for only two months before labour came on, and the growth of the fœtuses, for the first four months of pregnancy, was natural.

I am not able *to say whether* the changed condition of the placenta has been produced entirely by compression arresting nutrition or not: I have never met with one like it before, though I have examined some few aborted ova, even where they had been retained for many weeks after the cessation of fœtal life. If we can admit something originally wrong in the ovum, more particularly in that part which is to form the placenta, and which would prevent the progress of development at some time during utero-gestion, we have another cause, beside the alleged one of compression, to account for the early loss of vitality in the two smaller fœtuses; but I am more inclined to believe that the explanation of Dr. Merriman is correct.

Since writing the foregoing particulars, I have been favoured with the opinion of Dr. Murphy, Professor of Midwifery in University College, and I have that gentleman's permission to state that he believes the death of the two small fœtuses was effected by disease of the placenta, viz. inflammation and subsequent degeneration of its structure. It is true that the patient experienced much pain and abdominal tenderness during the pregnancy, and that this double placenta is diseased, which favours, if not confirms, the above opinion: but why the disease should be confined to this placenta alone I am unable to determine. Through the courtesy of Dr. Murphy, I had the opportunity of inspecting a plate representing diseases of the placenta in Cruveilhier's work, where the very remarkable fact is shown of one half of a double placenta diseased, similar to the one on the table, with an atrophied fœtus attached, and the other half healthy with a fœtus nearly double the size of the former.

The larger fœtus is about the size of a five months' conception. Had the mother in this case gone through the whole period of gestation, doubtless the smaller fœtus would have presented the same flattened and compressed appearance as in the case I have related. Dr. Merriman, in his very extensive experience, has met with only one analogous case, and that was in twins, not in triplets. Dr. M., as far as his memory served him at the time when spoken to, informed me that he delivered a woman in or about the ninth month of pregnancy, and that upon removing the placenta he found imbedded in it a small fœtus as flat as a flounder. I may advert to the case of the late Dr. John Clarke, reported in the 16th vol. of the Medical and Physical Journal, where the Doctor states that he attended a patient in labour who was delivered of the child and placenta by the natural efforts, and on the second or third day he was summoned to see her in consequence of something uncommon presenting at the vulva. He found what he likened to two small sticks attached to a softer substance, which upon being removed proved to be the remains of a small fœtus in a high state of decomposition, which, being unfit for the museum, he threw behind the fire, and for so doing no small outcry was raised against the Doctor at the time of its occurrence. Probably this would have been avoided had the Doctor carefully introduced his finger into the vagina after the delivery of the placenta. Dr. Clarke speculates upon the cause of death in the one child by supposing there to have been some derangement in the placenta, but nothing more. Each medical practitioner will form his own opinion as to the cause which disturbs and ultimately extinguishes the functions of fœtal life in these cases,—whether it be not sometimes that of compression upon both placenta and fœtus; at other times, and perhaps most frequently, that of disease (inflammatory or congestive) of the placenta. Could we assign certain symptoms to certain morbid changes which may be going forward during pregnancy, we might do more for some of our patients, but this, I fear, will be found a difficult task; yet I think that the occurrence of an unusual degree of pain or tenderness about the impregnated uterus should be looked upon as suspicious of disease, and render the adoption of remedial measures more frequent than at present, particularly one which was formerly in great estimation, viz. bloodletting. The subject is, I think, of sufficient interest to engage the attention of accoucheurs.

Mrs. S. is now in health, having lost a dragging pain in the left side, which troubled her for some time after her delivery. Menstruation is regular, and attended with less pain. It is two years since she was confined with these triplets, and she has not again conceived.

With respect to the question of superfœtation, I can see nothing to warrant such an opinion in this case. I may remark that there were two placentæ, a single and a double one, and that a portion of the membranes fully three inches in breadth did extend from the margin of one to that of the other. Does not this close connection indicate with considerable probability, if not with certainty, that the ova entered the uterus at or about the same time? This same kind of connection by means of the membranes I believe exists in cases of twins with two placentæ. The preparation shews the fatty placenta and the membranes forming three sacs. The smaller umbilical cord is seen coming out of the membrane, and apparently divided into two parts before leaving the placenta, close to its margin. An attempt to inject the placenta through the umbilical vessels failed, from a rupture occurring at the root of one of them, probably from the resistance offered from the change of structure. The compressed condition of the smaller fœtuses at the time of delivery has been very much changed by maceration and putting up in spirits.

ON THE

BILATERAL OPERATION OF LITHOTOMY;

AND ON LITHOTRITY IN THE FEMALE.

By John C. Warren, M.D.

Professor of Anatomy and Operative Surgery in Harvard University, Boston.*

The operation of lithotomy is so rare in this place, that it would demand a longer period than the life of one practitioner to settle the question, in this part of the country, as to the best mode of operating. In the course of forty years, I have been called on to perform all the operations of lithotomy which have been done, during that period, in the city of Boston. The whole number has not exceeded twenty-five, inclusive of lithotrity cases, in a population which, during the period mentioned, has increased from about 26,000 to more than 100,000. Of the twenty-five persons thus operated on, not more than three were natives of

---

* Communicated by the Author.

Boston or its vicinity; the others came from the remote parts of Massachusetts, from New Hampshire, from a calcareous district in Maine, and from Nova Scotia. Perhaps it may be proper to add, that, of the cases I have operated on, two have died; one of these was a case of very unfavourable nature, the patient being of gross constitution, bad health, and having a very large stone adherent to the interior part of the bladder: he died of suppuration in the pelvis. The other was the case of a patient who was doing perfectly well, but, on the fifth day from the operation, he indulged himself in eating heartily: he died of general peritonitis.

The comparative immunity of this city and of this section of the country, has been a subject of inquiry; but, as we are ignorant of the causes which favour the production of urinary calculi generally, we cannot expect to ascertain the reasons why the inhabitants of this vicinity are exempted. To resolve the question satisfactorily will require an extensive collection of observations in the different sections of this country.

It may be stated that Boston and its immediate vicinity contain no calcareous rocks; that the spring-water of Boston is abundant in muriatic salts; and that the whole of the region is exempted from intermittent fever. I am induced to state this last fact, because some authors have expressed the opinion that stone and intermittent fever have their origin in a state of constitution generated by miasma. Most of the facts within my knowledge would lead me to the belief that the stone is more likely to be produced by calcareous water than by atmospheric miasmata; although I am aware that there is a strong objection to this last opinion, in the diversity of composition of calculous concretions, as some of of them are entirely destitute of calcareous substance. It is known, moreover, that, in the calcareous regions of this country, and especially on the banks of the great rivers which run through a calcareous soil, the occurrence of urinary calculus is vastly more common than it is here. A distinguished surgeon of Montreal informed me that, when he had been in practice but a few years, he had operated on forty cases of stone in the bladder. Dr. Dudley, of Lexington, Kentucky, has operated on from a hundred and fifty to two hundred cases. The operations by Drs. Mott, Stevens, and others, in New York; by Drs. Gibson, Randolph, and other surgeons, in Philadelphia; and by Dr. Smith and various gentlemen of Baltimore, are very frequent. Happening to be in Philadelphia in the spring of 1843, I saw two cases operated on by Dr. Norris, one case of lithotrity by Dr. Mütter, and the latter gentleman had another case for lithotomy, on which he was about to operate. It may be further remarked that, in all the places last mentioned, intermittent fever exists, and, so far as I know, has always existed.

The particular object which I have in view in this communication, is to direct the attention of our profession to the best mode of doing the operation of lithotomy. I have, till recently, performed the lateral operation, formerly with the gorget, and latterly with the knife. In the two cases alluded to above, which terminated unfavourably, the gorget was employed. Accident led me, a year or two since, to examine the merits of the bilateral operation more exactly than I had ever done before. In this investigation I many times dissected the organs concerned in this operation, both before and after having done it on the dead body. The result was so satisfactory that, in a case particularly adapted for this mode of operating, I ventured to do it on the living body, and found it to be comparatively so easy in the performance, and so successful in the result, that, in the next case which presented itself, I was induced to repeat it. These cases I ask leave to bring before the profession in this country, in order to invite their examination into the merits of this mode of extracting stone from the bladder.

Case I.—G. T., a married man and a farmer, born in Middlebury, Massachusetts, and 53 years of age, was admitted to the Massachusetts General Hospital on the 13th of January, 1842, for incontinence of urine.

A very imperfect history of the case is given in the records of the hospital, the regular house-surgeon being absent at the time of his admission. It appears, however, that he was, for two months, in 1824, a patient in the house, in consequence of some difficulty about the urinary organs.

For the past sixteen years he has been obliged to use the catheter to draw off his water. During this period he suffered no pain, until two years since, when an abscess formed, and broke near the neck of the bladder. Since then he has suffered great and gradually increasing pain, which has now become constant and almost insupportable.

His urine is, and has been for some time back, discharged involuntarily and continually; it is intermixed with pus and mucus, and of an excessively fetid odour; it is often coloured with blood. The urethra, he reports, is occasionally obstructed by this muco-purulent matter, which is removed by passing the catheter. Such is the substance of his history, as taken from the records.

The glans penis was enlarged; the prepuce was elongated, so as to form phymosis. The perinæum was the seat of a hard tumor, about an inch in length, extending between the scrotum and the anus: this tumor was probably a consequence of the chronic inflammation to which these parts have been so long subjected.

His external appearance was marked by suffering; he was pallid and emaciated; the muscles of his face were habitually contracted. The constant discharge of offensive urine and pus, and the consequent contamination of his clothes and bed-clothes, rendered the business of examination more than commonly unpleasant.

An instrument being passed by Dr. Hayward, immediately stuck a calculous substance. Two or three days after, I examined him in company with Dr. H., and, introducing a sound, found it arrested, after it had penetrated about three-fourths of the length of the instrument, by a stone, which was evidently not situated in the bladder. An attempt to cause it to penetrate beyond this point was not, at this time, successful, and, the patient complaining of great suffering from the examination, the instrument was withdrawn. I then made an examination per anum, and found this part exceedingly sensitive, especially on its anterior wall, so that the contact of the finger produced evacuation of flatus and fæces. The prostate gland was much enlarged, and, at one point, appeared very hard.

On a subsequent examination, the sound was passed a little way on one side of the stone, and afterwards Dr. Hayward, who had charge of the patient at the time, passed it beyond this stone, and apparently into the urinary bladder. Another examination, which I made some time after, satisfied me of the existence of two stones—one of which occupied the neck of the bladder, and entered into that part of the urethra surrounded by the prostate gland. This first stone prevented any closure of the neck of the bladder, and was thus the cause of the non-retention of the urine. The other stone appeared to be in the urinary bladder, which was, however, excessively contracted, from its not being at any time dilated with the urine.

The patient was ordered to confine himself, in a great measure, to the horizontal posture; leeches were applied to the perinæum once in three days, with the hope of lessening the chronic inflammation in and about the urinary passages. The bowels were carefully regulated, and he took, occasionally, small doses of nitrate of potassa; his food was of a generous nature in a moderate quantity.

Under this treatment, aided by the use of opiates, his sufferings were somewhat diminished, and his general health improved, so that he was thought to be in a proper state for an operation, for which he was very anxious. The case being of a peculiar character in some respects, it appeared to me that the lateral operation of lithotomy could not be judiciously employed, for the following reasons:—

First, a stone being apparently wedged in the prostate gland, and occupying the whole space of the urethra within that part, an incision of the left lobe of the prostate, of sufficient size to remove this stone, could not be made with the usual instrument, on account of the interference of the stone with the extremtiy of the probe-pointed knife, or gorget.

Second, an incision down to the prostate, in the part where the lateral operation is usually performed, would be unnecessarily circuitous.

Third, there would probably be a difficulty in manœuvring the forceps in the deep wound made in the lateral operation, in consequence of there being no cavity about the stone.

For the reasons above stated, I was

led to consider the practicability of other modes of removing the stone. Lithotrity, of course, presented itself in the first place, but a little reflection showed that the objection to the use of the forceps in the lateral operation might hold with still more force in regard to lithotrity, since the want of room would prevent the opening of the instruments, which are used for seizing and breaking the stone.

The operation by the rectum could have been executed with great facility from the proximity of this part to the stone, and the great relaxation of the anus: the objection to this operation was the probability of a recto-vesical fistula.

Another mode of operating which presented itself, was, the transverse incision of the perinæum, according to the method recorded in the works of Celsus, and since improved by Dupuytren and other distinguished surgeons. This manner of operating seemed to have the advantage, first, of conducting to the stone by the shortest route from the exterior of the perinæum, and secondly, that, in this manner, fewer and less important parts would be wounded than in any other. This method was, therefore, concluded on.

The patient was prepared by taking a purgative the day previous, and on the morning of the operation a common enema, followed by another of two ounces of water, containing two hundred drops of the tincture of opium. The operation was performed February 5th, in the presence of the medical class, and various medical gentlemen of the city; and I was assisted particularly by Drs. Hayward, Townsend, and Jeffries, attending and consulting surgeons of the hospital.

In the first place, a sound was introduced to ascertain the existence of the stone, which was very readily done, because an instrument could not enter the bladder without striking the stone. The rectum was next examined, to ascertain if it were free from fæces.

After these preliminary arrangements, the patient's hands and feet were bound together in the mode usual in this operation. A staff of large dimensions, grooved as usual, was then placed in the urethra, conducted to the stone, and there *fixed. A crescentic incision was now made across the perinæum, between the scrotum, on the* fore-part, and the verge of the anus, on the back part, its concavity looking towards the anus. This incision was two inches and a half long, three-fourths of an inch in front of the anus, with the two extremities of the wound directed towards the tuberosities of the ischia. It divided the skin, superficial fascia of the perinæum, adipose tissue, and exposed the bulb of the urethra. The latter was then raised, and the urethra being drawn by the staff towards the perinæum, while the operator passed his finger into the rectum, a longitudinal incision was made in the membranous part of the urethra, behind the bulb and in front of the prostate gland.

A straight, short, narrow, probe-pointed knife, with a long handle, was then passed along the groove of the staff into the bladder, with some interference from the stone, which prevented it from readily entering.* The staff was now withdrawn, and the knife, supported by the forefinger of the left hand, was directed towards the left tuberosity of the ischium, cutting the prostate gland to the extent of three-fourths of an inch:—the same was done on the other side.

The finger then passed freely into the bladder, pushing before it a considerable calculus, which could not have been seized in its original situation, on account of the difficulty in expanding the forceps. The knife was now withdrawn, and upon the finger remaining in the bladder, the forceps were introduced. By them the stone was readily struck, immediately grasped, and brought to the orifice of the wound: but having been seized by its longitudinal diameter, it could not pass, and was, therefore, dropped, and laid hold of according to the short diameter. It was then readily extracted by slight lateral movements, tending to the direction of the axis of the prostate gland. The finger was then passed into the bladder, and discovered another stone, smaller than the first, which was at once seized and extracted.

---

* The lithotome proposed by Dupuytren does not appear to me to be an instrument which is calculated to make an incision of a definite extent, as, on account of the length of its blades, there is a spring or yielding of them which renders the wound of the prostate gland smaller than the opening of the instrument. Another objection to its use is, its complexity, for complex instruments should always be avoided, when simple ones may be made to answer. A third objection is, that this instrument, after its introduction into the bladder, requires to be turned over, a movement by which the instrument might possibly be displaced.

Not more than two ounces of blood were lost in the operation; and the time occupied was three or four minutes; but not being in the habit of measuring time by the watch in these cases, the precise duration is unknown. The patient being loosened from confinement, seemed to be very happy; and after being placed in his bed, said that he had not been so easy for the two last years. The largest stone was of a pyriform shape, and measured one inch and a half in length by one in width, and weighed nine drachms nine grains: the smaller was of a cubical form, about three-fourths of an inch in diameter, and weighed three drachms thirty six grains:—the whole weight being twelve drachms and forty-five grains. They were both composed of the phosphate of lime.

The subsequent symptoms were so very mild as scarcely to require any record. He had hardly any acceleration of the pulse, pain, heat or other marks of inflammation: he slept well, in consequence of the great relief from pain he had experienced. At the end of a week he was directed to rise in bed, which from habits of long inactivity, he was very reluctant to do; at the end of a fortnight he was allowed solid food, and directed to get out of bed.

Shortly after this, perceiving a white covering to the wound, I passed the finger into it, and discovered that the whole of it was lined with a calcareous incrustation, consisting apparently of phosphate of lime. Cloths, moistened with diluted muriatic acid, were then applied within the wound; the patient was also directed to take the same acid internally as freely as he could. The calcareous appearances soon afterwards went off, and the wound contracted to about the size of a quill. A catheter was now introduced into the bladder, and met with a slight obstruction in the prostate gland, which was readily overcome. This instrument was afterwards used daily, and sometimes retained for a short period: the wound was also directed to be touched daily with the nitrate of silver.

On the 31st of March, the patient was, by his own request, discharged, and went home to his family; the wound had not entirely closed, but was in a favourable condition.

Remarks.—The operation of lithotomy, according to the method of Celsus, has been rarely done in Great Britain, or in this country.* It presents some advantages, which are well worthy the consideration of those who may have occasion to perform the operation of lithotomy. These advantages appear to be:—

First, that the parts cut are more simple in structure than those concerned in the lateral operation; the nerves and the blood-vessels are necessarily smaller as they approach the median line.

Secondly, the pain and hæmorrhage are, consequently, less than in the lateral operation.

Thirdly, the access to the membranous part of the urethra, and to the bladder, is more direct.

Fourthly, the prostate gland being more completely exposed, may be divided with more precision.

Fifthly, the opening into the bladder may be double the size of that made in the lateral operation, without increasing the danger of cutting the vesical plexus of veins, the prostatic fascia, or the internal pudic artery.

Sixthly, the danger of subsequent inflammation is decidedly less.

The principal objection to this operation is the risk of wounding the rectum. This is certainly very considerable: but by drawing the staff with the urethra and prostate gland, towards the symphysis pubis, and with the finger of the left hand upon or in the rectum, drawing that intestine in the direction of the os sacrum, this danger will be found less, perhaps, than in the lateral operation. It may be objected that in the present case the wound was longer in healing than it frequently is after the lateral operation. The reason of this, however, is to be found, not in the form and direction of the wound, or in the parts implicated, but in the morbid state of these parts, and general condition of the patient, previous to the operation.

---

* I call this the method of Celsus, but it is, in fact, a variation from his method so considerable as almost to amount to a different operation. The operation of Celsus was performed without a staff or sound; his crescentic incision of the skin had its horns or extremities pointing forwards towards the thighs, "cornibus ad coxas paulum spectantibus," (Cels. Lib. vii. Sec. xxvi.,) instead of backwards towards the tuberosities of the ischia. Again, by his method the bladder was penetrated at its neck, without touching the membranous part of the urethra: this would, of course, endanger the incision of the vasa deferentia and vesiculæ seminales. The method, originally proposed by Celsus, was improved by Paulus Ægineta, and afterwards essentially altered by Heister. But in its present form, and that employed by me, it was originally proposed by that accomplished gentleman and eminent professor of the Parisian School of Medicine, M. Ribes, who described his plan to Chaussier, without publishing it at the time. Dupuytren, who was at one time colleague of Chaussier, afterwards adopted the operation, almost exactly, as proposed by Ribes, actually performed and introduced it into practice, as more eligible than the lateral operation. He also illustrated it by descriptions and engravings, which gave a scientific character and stability to the operation it had not before possessed.

Although I should certainly not feel justified in recommending this operation for general use, from the experience of a single case, yet so far as this experience extends, aided by the light afforded by many dissections made with the view to this subject, I should feel disposed to employ this in most cases where lithotomy was required, in preference to the lateral operation.

Since the occurrence of this case, another has presented itself, which I shall now proceed to relate.

[To be continued.]

ON THE

PATHOLOGICAL CHARACTERS OF THE BLOOD AS IT EXISTS IN THE EXANTHEMATA.

By William Camps, M.D. Edin.
Physician to the Farringdon General Dispensary.

The Exanthemata constitute a portion of a large class of acute diseases designated by nosologists Pyrexiæ, which differ from simple inflammations or Phlegmasiæ not only in the causes which produce them, in the symptoms which are peculiar to them, and in the morbid changes which they effect in the solids—changes usually following the febrile action pervading the body—but also in the well-ascertained pathological characters of the most important fluid of the body—the Blood.

The fibrine of the blood in the Exanthemata is seldom or never increased; it often exists in its normal proportions, and sometimes *it is diminished* far below its proper quantity. The globules, or blood-corpuscles, on the other hand, are found to be increased beyond their normal proportion in scarlatina and rubeola, and more so in these two affections than in variola and varioloid disease.

M. Andral has shewn that the pustules in variola do not produce, nor are accompanied with an increase of the proportion of the fibrine of the blood; and that with every possible proportion of the globules or blood-corpuscles, whether they be in excess or in diminished quantity, an eruptive fever may equally exist, in all its varieties of form and of severity.

MM. Andral and Gavarret have analysed the blood in five cases of variola attended with a confluent eruption. Twelve venesections were performed on the subjects of these five cases of variola, at different periods or stages of the disease, yet in all these analyses the globules or blood-corpuscles differed but slightly from their healthy proportion, whilst the quantity of the fibrine varied considerably, yet the increase above the physiological proportion was but trifling.

The same observers have analysed the blood drawn in two cases of varioloid disease: in one the venesection was performed on the second day of the eruption, and in the other on the third day. In both these cases the fibrine was sensibly diminished, whilst the blood-corpuscles varied but little from their normal standard.

MM. Andral and Gavarret state, that in rubeola the proportion of fibrine never exceeds its proper limits, nor does it fall much below them; and in most cases the blood-corpuscles are somewhat above their normal quantity. The venesections were performed on the first, second, and third days of the appearance of the eruption, except in two instances, in which the venesections were performed after the disappearance of the eruption.

They have also made four analyses of the blood drawn from three patients affected with scarlatina. In two of these bleedings the blood, on analysis, yielded a larger proportion than usual of both the fibrine and the blood-corpuscles. The venesections were performed in two instances on the second day of the eruption, and in one instance during convalescence.

Lecanu has made analyses of the blood in scarlatina, which corresponded in their results with the observations of Andral and Gavarret, and proving that the blood-corpuscles were in greater proportion than in the normal state, although the proportion of fibrine was not accurately ascertained.

Whilst many cases of Exanthemata proceed on through their entire course without any severe complication attending them, and throughout assuming a favourable form or type in their progress towards a favourable termination, we meet with other cases which, either from their commencement or during their course, are accompanied with such serious complications, or assume so unfavourable a form or type, as that it appears probable that life must fall a victim to the disease, so much is it threatened by the prostration of the vital powers. In these severe cases of eruptive fevers, the blood has been observed to become thinner, and of less consistence, containing much less of fibrine; the opposite to that state of the blood which is observed in the Phlegmasiæ, where the proportion of the fibrine is usually greater than natural. Such a deficiency in the proportion of the fibrine, whenever it occurs, involves considerable alterations in the physical characters of the blood. The serum of the blood appears small in quantity in proportion to the clot, and they are not so distinctly separated from each other as in healthy blood, or as in blood drawn in cases of Phlegmasiæ. The clot too is large, and sometimes occupies the extent of the vessel into which it has been received; and besides, it is never cupped, as it commonly is in the Phlegmasiæ, and its consistence is usually so slight, that it may be very easily torn or broken down on pressure.

Another important character of the blood, negative it is true, which has been observed in this class of diseases, is the absence of the buffy coat. M. Andral states that he has never found this present in rubeola, scarlatina, or variola, except in cases where there had been some well-marked inflammatory complication attending them. He adds, that in variola, when the eruption is very confluent, and especially when there are collections of pus existing beneath the integument, or in *some organ*, the buffy coat may be found on the surface of the clot; but this buffy coat, instead of being firm and tenacious, is very soft and gelatinous. If the necessary condition for the production or formation of the buffy coat be a certain excess of the fibrine in proportion to the blood-corpuscles, we can easily understand how it may be absent in blood drawn from patients affected with diseases in which the fibrine is almost never in excess, but is found either in its normal proportion, or diminished below that. Andral supposes that this diminution of the fibrine is owing to an influence or cause, of the nature of a poison, which, if it be only slight, must exert a certain effect on the blood, although it may not be appreciable; whereas, if this poisonous influence or cause act in a stronger degree, its effect on the composition of the blood then becomes evident, both in its physical and chemical characters.

50, Green Street, Grosvenor Square.

SCIENTIFIC CONGRESS AT GENOA.

The *Gazette Médicale* informs us that no less than seven hundred and eighty *savants* assembled at the scientific congress at Genoa! It appears that some restriction has been placed upon the admission, something more than the mere payment of a subscription being demanded by the committee. The applicants were required to shew that they had some title to be admitted to a congress of scientific men. The next annual meeting will take place at Rome.

INAUGURATION OF A STATUE TO FODÉRÉ.

A statue has been recently erected to this eminent medical jurist in his native town, Saint Jean de Maurienne, a secluded spot in the mountainous district of Savoy. François Emmanuel Fodéré was formerly professor of medical jurisprudence in the University of Strasburg, when that science might be said to be in its infancy, and he is well known as the author of an extensive treatise on the subject, in six volumes (*Traité de Médecine Légale et d'Hygiène Publique*), the last edition of which was published in Paris in 1813. The statue which has been recently inaugurated is of bronze: it was executed in Paris by M. Louis Rochet, and it represents the professor in his University costume, with his left hand resting upon a volume, on which are inscribed the words—MEDECINE LEGALE.

MEDICAL GAZETTE.

FRIDAY, OCT. 2, 1846.

The attention of the public has been somewhat painfully drawn within the last few weeks to certain revolting disclosures which have been accidentally made respecting the mode in which the bodies of the dead are disposed of in this metropolis. Various attempts have been made since the publication of Mr. Chadwick's Report to induce the Legislature to place some restrictions on intramural interments, but these have uniformly failed. In the session of 1845 a resolution was carried in the House of Commons, although strongly opposed by the Government, to the effect, "that the practice of interments within the precincts of the metropolis and large towns, is injurious to the health of the population, and demands the serious attention of Parliament." It might have been supposed that the affirmation of this principle would have entailed no serious responsibility even upon those who were not prepared for immediate legislation; since it is impossible for persons acquainted with the subject, not to assent to the propriety of its terms. The resolution was, however, passed by a small majority, and there the matter for the time ended.

In the last session of Parliament Mr. Mackinnon introduced a bill, based on this resolution, but it was withdrawn at the request of the Secretary of State, who gave a somewhat indefinite kind of promise that the subject should receive the attention of Government in the next session. The question is, whether a measure of this kind will meet with a better reception from the present, than from the late Government. In reference to Mr. Mackinnon's bill, Sir James Graham, while holding office, said that he was prepared to give it his most candid consideration; but the whole tenor of his argument was to show that it is not expedient to interfere with the practice of intramural interments; and that legislation upon it, to the extent of applying a sufficient remedy, is utterly impossible. We had always thought that where a want was clear and palpable, a disposition to supply it would be evinced by some attempt at legislation; and that, where the *salus populi* was concerned, it was the duty of the Legislature to disregard the difficulties which might in the first instance be opposed to the discovery of a clear and well-defined remedy. If we mistake not, there are numerous cases in which legislative measures, without reference to their immediate perfection and adequacy, are enacted for the removal of public evils; and whether these measures do or do not conflict with private interests, is not so much the question, as whether they are in themselves reasonable, beneficial to the community, and capable of serving as a foundation for further improvement. On what other principle are we to explain the proposed introduction of a most important measure for the improvement of the sewerage and drainage of towns and populous districts? But it seems that the view of the Legislature is, that one set of nuisances shall be abolished, while another shall be allowed to continue, despite the proved necessity for some change in the pernicious system of burying the dead in the midst of the living; and of thereby converting every large town into a great receptacle of putrefying animal matter. Mr. Chadwick's Report has been frequently referred to by those who have treated this subject. Notwithstanding the allegation made by the *intramural* party, that the statements therein contained are much exaggerated, we are inclined to put faith in them; because the conclusions are borne out, not merely by evidence quoted from numerous authentic sources, but by common sense. From this Report we learn that in the metropolis, on spaces of ground which do not exceed 203 acres, closely surrounded by the abodes of the living, layer upon layer, each consisting of a population numerically equivalent to a large army of 20,000 adults and nearly 30,000 youths and children, is every year imperfectly interred! Within the period of existence of the present generation, upwards of a million of dead must have been interred in these same spaces. A layer of bodies is stated to be about seven years in decaying in this metropolis: and the decay must take place by the conversion of the remains into a gas, and its escape as a miasma of many times the bulk of the body that has disappeared. "In some of the populous parishes, where from the nature of the soil the decomposition has not been so rapid as the interments, the place of burial has risen in height; and the height of many of these must have been greatly increased, but for surreptitious modes of diminishing it by removal, which it must be confessed has diminished the sanitary evil, though by the creation of another and most serious evil, in the mental pain and apprehensions of the survivors, and feelings of abhorrence of the population, caused by the suspicion and knowledge of the disrespect and desecration of the remains of the person interred."

There are two aspects under which this subject may be viewed,—one relating to medical police or the health of a town population; and the other to the indecencies which appear to be inseparable from this mode of burial. We shall now regard the question as one affecting public health. And here we cannot help being struck with the inconsistency of those who are opposed to any change, in bringing forward for legislation on the supply of water, and the improved drainage and sewerage of towns, reasons which they utterly repudiate when applied to the abolition of intramural interments. Thus, we find one high authority declaring that he demurred to the statement that the public health was endangered by interments within cities. He believed that there was no metropolis, considering the extent of population, in which, on the whole, the public health was so good as this. The Bishop of London had told him that when he was rector of Bishopsgate, the rectory in which he lived was near the churchyard. He had a large family living with him, and at no period had they ever been in better health than when they lived there. If any inference can be drawn from this statement, it is that residence near a graveyard in a crowded city is rather beneficial to health than otherwise!—and thus we have a witness who proves too much. Doubtless, it might be possible to find individuals who enjoy excellent health while residing in an imperfectly drained locality, with stagnant ponds of decomposing animal and vegetable matter in front of their dwellings, or damaged sewers beneath them; but would this affect the general question as to the propriety of the removal of such nuisances? We think not. But the statement itself is refuted by the evidence collected in the Reports on the sanitary condition of the poor, respecting the loathsome state of the burial grounds in populous parishes, and their effects on the pauper population.

We know that an opinion which has received the support of Orfila and Parent-Duchâtelet has prevailed, to the effect that the miasmata of putrescent animal matter are not dangerous to health, and that a population is not likely to suffer from the practice of intramural burial; but this opinion has been based upon limited observations, is of a purely negative character, and quite inapplicable to those cases where many thousands of dead are being annually buried in confined spaces in the midst of crowded towns and cities. Even allowing that the soft parts of the body are entirely decomposed in a period of seven years, there are not less than 300,000 bodies in a state of decomposition at any one time in the graveyards of the metropolis, i. e. provided the remains have not been carted away as rubbish by dust-contractors.* The gases evolved are well known to be destructive to life; they may, it is true, be respired without immediate danger in a highly diluted state, but it is a well-established fact that a vitiated atmosphere long breathed is a prolific source of disease. He who is prepared to assert that this vast mass of animal matter in a state of decay is innoxious, must also, to be consistent, contend that the drainage and sewerage of a town are superfluous; since the results of the decomposition are the same in the two cases. But as an answer to this it may be stated, that in the Reports on the Sanitary Condition of the Labouring Classes, it does appear most clearly that the collection of animal excrement and other matters in stagnant cesspools, close to inhabited dwellings, is highly injurious to health, and productive of fever and other diseases. We are not aware of any chemical reason why the putrefying exhalations of the dead animal body should be less injurious to health than those of putrefying excrementitious matters; and it rests with those who assert that there is a difference, and that we may safely collect the one in pits about inhabited dwellings, while we cannot collect the other without serious risk to life, to shew in what this difference consists:—why, for example, a grave-yard filled with putrefying dead bodies should have no injurious effect on health,—while the same locality, filled with the contents of our drains and sewers, would become a fertile source of disease!

It may be said that a question of this kind can only be determined by observation; and the facts collected by Orfila and Parent-Duchâtelet shew that there is no detriment to health produced by the exhalations from the dead. We would, however, remark, that observation is very apt to mislead, and unless great care be taken to estimate the influence of numerous modifying circumstances, the most erroneous inferences may be drawn. This is especially the case where a few isolated instances of escape are taken to represent the probable effects of putrescent effluvia on a large scale; and we may be sure that there is some fallacy, when, without any chemical or other reason for the difference, we find that the same effluvia are *proved* to be noxious in one case, and are merely *inferred* to be innoxious in another. Besides, the results collected by these observers, in respect to the effects of the effluvia from the dead, are totally opposed to those which have been obtained in this country by persons quite competent to judge of their influence upon health.

One circumstance may appear to give strength to the opinion that there is no danger to public health in intramural interments, namely, that the bodies are commonly buried at some depth below the surface; and the effluvia are kept down, or diffused beneath the soil;—they are thus supposed to be lost without contaminating the atmosphere. It is, however, well known that the grave-yards of the metropolis are at present overfilled; and that it is impossible to bury one-half of the dead at such a depth as to prevent the ready escape of the effluvia into the atmosphere. Even were it otherwise, it must be remembered that whenever decay takes place, these noxious gases are evolved, and they must find some means of escape,—if not through the porous soil into the atmosphere, they will pass into the water of the common springs, which thus becomes polluted, and detrimental to health.

---

* *See page 509.*

Our conclusion, therefore, is, that if good drainage and sewerage be necessary for improving the health of towns, some alteration in the practice of burying the dead in the midst of a living population is also urgently demanded. Irrespective of injury to vested rights, a question which should be always subordinate to the preservation of public health (*salus populi suprema lex*), there is no argument now so successfully applied to the abatement of one nuisance, which is not equally applicable to the removal of the other. But the importance of hygienic rules is, we fear, but little understood by legislators. One of the strange absurdities of the present day is, that, on the one hand, acts of Parliament are passed for the improvement of prisons and the sanitary condition of prisoners, while, on the other hand, it is made an imperative part of our system of capital punishment to bury the dead bodies of malefactors within the precincts of the gaol—as if the object of *the law were to* convert each prison *into a charnel house!*

Reviews.

De la Température chez les Enfants à l'état Physiologique et Pathologique. Par le Dr. Henri Roger. Paris: 1844-5.

On the Temperature of Infants in relation to Physiology and Pathology. By Dr. Henry Roger. 8vo. pp. 187. Paris: 1844-5.

The substance of this treatise was read before the Academy of Sciences, in 1843, and was published in the Archives Générales de Médecine. As the title implies, the object of the author has been to determine not only the normal temperature of infancy, but how far the measurable variations of temperature in different forms of disease might be rendered subservient to diagnosis and treatment. The instrument employed by Dr. Roger consisted of a well-constructed thermometer, with a cylindrical flattened reservoir for the mercury; and furnished with a scale so divided as to allow of the appreciation of one-fourth or one-fifth of a degree (Centigrade). Except in those cases where it was necessary to determine the local temperature of certain parts, the thermometer was always applied to the axillæ, the arm being brought to the side so that the mercurial reservoir—previously slightly warmed—was completely in contact with the skin. In from three to five minutes the mercury reached its maximum, and the observation was then taken.

The normal temperature was thus taken in some children during or immediately after birth; in others at from one to seven days; and in a third series of experiments at a more advanced age. One important part of the inquiry was to determine the relative temperature of different parts of the body in a *normal* state. Very conflicting results have been obtained by different observers. Dr. Roger states that he experimented on fifteen children, from eight to thirteen years of age; and he found, as a general rule, that the *axilla* was the warmest part of the body accessible to observation. This, while it happens to be most convenient for making experiments, is the spot where the thermometer attains, more rapidly than in any other parts, its maximum height. There is another circumstance which renders the axilla preferable for observation, in a physiological point of view, namely, that its temperature is as nearly as possible identical with that which is met with in the cavities of the chest and abdomen. Thus this is the only point of the exterior of the body where the temperature resembles that of the internal viscera, as ascertained by experiment, two hours after death; and in these, as it is well known, the function of calorification is at its maximum.

As a general rule, the relatively high temperature of parts may be taken in the following order—the axilla, abdomen, mouth, bend of the arm, hands and feet. There was but little difference between the temperature of the axilla and that of the abdomen. The mouth was from half a degree to two and a half degrees, and the hands and feet, which are much more exposed, were from nine to eleven degrees colder than the axilla. It is unnecessary to enter into the details of Dr. Roger's experiments, which appear to have been conducted in a way to avoid any imputation of fallacy. The animal body in some respects resembles an inert mass of matter, heated to a higher temperature than the medium in which it is immersed. A partial cooling is continually going on towards the surface: heat is progressing from within outwards; and thus it happens that the muscles have a higher temperature than the cellular membrane. In the inert mass there is no source from which the loss of heat can be restored; but in the living body there is a constant reproduction of caloric, so long as life continues, Experiment, however, clearly establishes that there is not an equilibrium of temperature in all parts of the animal body, and that the heat diminishes just in proportion as we proceed from the centre—a fact of some importance in relation to certain pathological conditions of the system.

Having established the *normal* temperature of infancy, and the healthy local variations, the next point was to determine the influence of certain diseases on the calorific function. In some cases the temperature was increased; in others it remained unaffected; while in others again it became diminished. The great bulk of the treatise is devoted to the consideration of the subject under these three heads, with the details of the experiments from which the author has derived his conclusions.

The following may be taken as a summary of Dr. Roger's results:—With respect to *physiology:* the *normal* temperature of the child is higher than that which is observed at a later period of its existence, or even in adults. It appears to derive this high temperature from the uterine cavity. In eight cases out of eleven it was found to have a temperature about one degree higher than the mother. This probably refers to comparative observations made in the axilla, since the author informs us that the temperature of the new-born child is almost identical with that of the cavity of the uterus. In aborted and prematurely-born children, the temperature is always lower, varying from 90° to 93°.* Immediately after birth the child begins to cool: it loses two or three degrees in a few minutes, owing to the medium in which it is now existing having a temperature about 35° below that of its body. This cooling would go on increasing as in the young of animals, but for the application of warmth and its retention by artificial means.

In about twenty-four hours after birth the animal heat appears to have reached its physiological mean; and at this degree it remains, with the exception of some slight oscillations, so long as the child continues in a healthy condition. The temperature of a child at the moment of birth was found to be 100°. In 33 new-born children, from one to seven days old, Dr. Roger found the mean normal temperature to be 98°.5; and in twenty-five children, between the ages of four months and fourteen years, the normal mean was about 98°.7, *i. e.* 3° lower than that assigned by Liebig as the average temperature of the infant child. Setting aside premature or diseased children, the observations made by Roger regarding animal heat corroborate those of Despretz, *i. e. that in the healthy body there is but very little difference of temperature at the different periods of life.* The physiological maxima and minima for all ages may be taken at 100°.3 and 97°; while the most frequently observed temperature of infancy is 98°6. This is the temperature which is perhaps more commonly met with than any other among adults; and that of advanced age only differs from it by a slight fraction of a degree.

---

* Dr. Roger's Centigrade degrees are throughout this notice rendered into those of Fahrenheit's thermometer, with which alone English practitioners are familiar.

If, however, it be admitted that the temperature of the body differs but little according to *age*, there is a great difference in its power of resisting the influence of cold under these circumstances. This is always at its minimum in the two extremes of life. This, then, is one point of approximation between advanced age and infancy: the body has, at these periods, a very great tendency to cool. According to Dr. Roger's experiments, the *normal exercise of the functions* produces no material alteration of temperature. Neither the sleeping nor the waking state, rest or motion, respiration or the process of digestion, exerted any appreciable influence. In some new-born male children, with a vigorous circulation and great strength of constitution, the temperature under these circumstances was found to become increased by about half a degree, or even a degree.

Dr. Roger's researches appear to be strongly adverse to the combustion theory of the production of animal heat and to the essential dependence of temperature on the function of respiration. There is no doubt that respiration has a very important influence on the production of animal heat, but to make it, as some modern theorists have done, entirely dependent upon the combustion of a certain weight of hydrogen and carbon in the lungs, according to the exact amount of oxygen taken with these organs, *i. e.* to reduce it to the same principle as the ordinary combustion of fuel, is to adopt a view entirely unsupported by observation. Among the doctrines promulgated by Liebig, and rather hastily adopted by his followers, "*addicti jurare in verba magistri,*" was one bearing on this question, which always appeared to us to be founded on a pure fallacy. It was said that the inhabitant of a northern climate, a Laplander or Esquimaux, for example, breathing a much more condensed air (from cold) than one inhabiting a southern climate, required a kind of food much richer in carbon and hydrogen in order to burn or consume the condensed oxygen, and produce a greater amount of heat to enable him to resist the intense cold around him. The well-known fact of the inhabitants of these cold regions living upon fish oil and fatty substances was then wound into this hypothesis, and appeared plausibly to confirm this view. It seems to have been forgotten, that the rein-deer, a warm-blooded mammal, is enabled to resist those external influences by feeding not upon train oil or blubber, but on a dry arid farinaceous moss; a substance containing no oil, and certainly no more carbon and hydrogen than the cerealia, or the fruits upon which man and animals feed in more southern climes. A more unphysiological hypothesis it appears to us could hardly have been devised. Fish oil, including fish and blubber, are not only the cheapest and most abundant of all the articles of food, provided by nature in these northern regions, but there is no other description of animal food to be obtained.

The Canadian hunter, exposed to an equally low temperature, thrives on "pemmican;" *i. e.* pounded rein-deers' flesh; and, setting aside the influence of habit and national custom, there is no doubt that the Laplander might adopt this kind of food, without incurring the risk of the combustion of his organs by the absence of the hydrogen and carbon of the oil to consume the condensed oxygen which he respires. The abundant use of alcohol in cold countries has been referred to a similar chemical hypothesis. Its affecting the body by acting as a powerful stimulant to the nervous system has been entirely lost sight of: it has been considered to act only by its hydrogen and carbon, and therefore to be chemically necessary to individuals exposed to cold, in order to enable them to consume the increased quantity of oxygen which it is assumed they respire. We have been led into this digression because there is even now a strong disposition, according to modern iatro-chemical doctrines, to make all the phenomena of animal heat a mere function of the combination of oxygen; the exact quantity evolved being reduced to a matter of arithmetical calculation according to the nature of the food and the quantity of hydrogen and carbon which it

s to contain. The period of
appears to furnish us with the
of testing the truth of this
sis. Dr. Roger, aware of the
nce of noticing the frequency
ration, as well as the number
tions simultaneously with tem-
e, has collected numerous ob-
ns on this subject. The bare
e recorded, without reference to
ticular theory. His third table
s the observations made on 25
n at different ages, from 5
to 14 years. There is no kind
rmity in the relation of respira-
temperature. The three first
the table will show this:—

	Respirations per minute.	Pulsations.	Temp.
s	22	64	98°
ths	36	120	98°
ths	44	120	98°

e first case there was the same
ture with half the number of
ions observed in the third case.
sight this may appear explica-
m a difference in the capacity
ngs, but there are other facts
same table against this view;
hild of five months, and one of
years of age, were found with a
mber of respirations (30) to
he same temperature, 99°,—
he only instance of anything
reement! Dr. Roger found in
nenting upon himself, that in
ng the respiratory movements
to 60, in two minutes the tem-
e increased one quarter of a
At another time, under similar
tances, raising the number of
ions from 24 to 54, a contrary
as obtained; the thermometer
arter of a degree! In the latter
e pulsations were diminished
, and in the former by four.
hor properly states, that con-
s must not be hastily drawn
ese conflicting results. Calori-
is a complex phenomenon;
ile we are seeking for a cause
ease of temperature in one
, there may be a latent cause
ease in the normal or patho-
condition of some other func-

in and other observers have
that the temperature of the
ring fasting is lower than that
d immediately after a meal.
experiments upon *children*
from 11 to 13 years of age, the process of digestion exerted scarcely any perceptible influence on the development of heat; since in three there was an increase of from a quarter to half a degree in an hour after the food was taken, and in two there was a decrease to a like amount. On three occasions, at different periods, he experimented on himself before and after dinner, and on neither occasion did the temperature of the body undergo any change. These results agree with those of Beaumont, obtained by the direct introduction of a thermometer through a fistulous opening into the stomach.

Admitting, then, that the healthy functions affect animal temperature to but a very slight extent, it will be proper to consider the influence of disease; *i. e.* to examine this subject in relation to *pathology*. The author found that the very slightest derangement of health—the most simple attack of fever, for instance—tended to raise the temperature of a child by several degrees; a result which is not witnessed under all the varied physiological conditions of infancy, or by exposure to an atmosphere of 104°. A similar phenomenon is observed with respect to *cold*. Although in infancy the calorific function is far more feeble than in advanced life, still the body of the child possesses to a certain extent the power of resisting the cooling effect of a low temperature. Let any morbid cause supervene, its temperature falls under these circumstances in a remarkable degree; a fact especially observed in cases of sclerema. This mysterious influence of disease in raising or depressing the calorific function in infancy is well worthy of attention. The older nosologists were aware of it, and thus diseases were classified as pyrexial or apyrexial. Experiments made with the thermometer confirm this view, and we find that in a large class of diseases the temperature is increased; in others, it is diminished; while in a few it is quite stationary.

It is a remarkable fact that the diseases in which the temperature of the body is reduced below the normal standard are very few in number. Infancy furnishes two, and adult age only one. In most pathological conditions of the system, circulation and respiration are accelerated:—it is in very few cases that these functions fall below the physiological standard. In considering temperature in relation to the morbid state of the body, we must distinguish partial from general modifications. Most commonly the increase is general, on the surface as well as in the interior of the body:—sometimes it is partial, and then, while the surface becomes cooled, the viscera become heated (intermittent fever), or it is confined to a limited portion of the surface, as in erysipelas of the face. In this case, the thermometer stands higher in the part affected than in those which surround it; but its temperature never exceeds the general temperature of the body (taken at the axilla), which is simultaneously increased. Cold may be also local, as in a paralytic limb, or in cancrum oris; or it may be general, in which case the body cools like a mass of inert matter, as in the cholera algida, and in œdema neonatorum—the only two diseases of infancy in which there is a general depression of temperature external and internal.

In those diseases which are marked by an increase of animal heat, the temperature was commonly observed to reach its maximum at the commencement of the disease, and not when this had reached its greatest intensity. This fact was especially noticed in cases of typhoid fever and of pneumonia. During convalescence the temperature gradually fell, but it remained for some time above the normal standard, notwithstanding the weakness and exhaustion produced by the disease and medical treatment. The individual was at the same time much more sensible of cold, a fact not indicated by the falling of the thermometer.

It is an interesting part of the inquiry to determine the limits of increase or diminution of temperature in the diseases of infancy. According to Andral the extremes in *adults* are not greater than 15°, — the fluctuations being from 92° to 107°. His observations were made upon most diseases, with the exception of the Indian cholera. In infancy, however, the extremes are considerably greater, being 72° and 108° respectively, or a range of 36°. The maximum 108°, was observed in a child ten years of age affected with meningitis. In a similar case of a child aged twelve, Prevost is stated to have met with a temperature of 111°. Although Currie has seen a child recover in whom the temperature was 109°, existence is scarcely compatible with a temperature above 107°·75; and an elevation of 9° above the normal standard is quite as much as any child can bear. In contrasting the hot dry skin of a child labouring under fever, with the soft and cool skin of one in health, it appears difficult to understand from our sensations that there should be a difference of only from 5° to 7° between them; but the extreme of morbid heat rarely goes beyond 109·°5. The temperature of the body in a morbid state, at all periods of life, descends proportionally much more than it rises. If 9° or 10° be added to the normal temperature, the child is liable to die; but if a disease tends to lower temperature it may lose as much as 27° before death takes place. The minimum temperature 72°, was observed in a new-born child affected with œdema; and under these circumstances it survived a day. Dr. Roger has never known a child recover in whom the temperature fell to 90°; and he thinks that a fall of from 7° to 9° below the normal standard, is in general incompatible with recovery. Dr. Czerniak met with instances of recovery from epidemic cholera in adults, in whom the thermometer fell so low as 75°, and possibly this may be observed in younger subjects. One reason why the constitution, both in adults and infants, may be able to support so great a depression, is that the cold comes on very gradually.

Among the special facts in pathology connected with temperature, Dr. Roger observed that there was a decided increase in all the varieties of fever. This was most intense and most persistent in typhoid fever. In 14 cases out of 23, the thermometer exceeded 104°. In this disease also there was observed to be the greatest contrast between the increased temperature, and the number of pulsations,—the latter being, as a mean, 115°. In the exanthemata there is a decided increase, greatest in scarlatina, then in variola, and least in measles. The temperature is also higher than the normal standard in inflammation of the serous membranes. In the acute form of phthisis, and in ie inflammatory congestive stage of ooping-cough, there is an increase; ut otherwise there is but little deviaon from the mean. It is only in holera and in œdema that there is a eneral and uniform depression of temerature. In severe cases of cholera ı adults, according to Casper, the emperature was commonly never bove 79°. The lowest temperatures ave been met with in infants labourıg under sclerema: in one case it was bserved as low as 72°, *i. e.* 27° below he normal standard. As the calorific ınction becomes more and more deressed, the new-born child becomes, s it were, a cold-blooded animal, havng a temperature only a little above hat of the surrounding medium. The old becomes even greater than that f death. Dr. Roger found in these iving œdematous subjects a much ower temperature than in the bodies f children which had died from pyexial diseases twelve or thirteen ours before the observations were nade! In this respect œdema is at one nd of the scale, and pneumonia at he other. Between the maximum of he one, and the minimum of the ther, there is a range of nearly 36°.

Dr. Roger concludes his essay with he practical applications of his researches to diagnosis, prognosis, theapeutics, and hygiene. Into this art of the subject we do not propose o follow him. He appears to have reat confidence in the employment of he thermometer as a means of diagnois in certain diseases, and thinks that t may often supersede other and more ommon methods of exploration. Thus, with regard to bronchitis and neumonia, the symptoms and stehoscopic signs may be such as to lead o doubt. Here, he tells us, if the temerature does not exceed 100°, the ase is probably one of bronchitis; ut if it reaches 104° or 106°, we may e almost certain (?) that it is a case f pneumonia. Thus Dr. Roger would se the thermometer as many physiians now use the stethoscope.

While we are willing to admit that the thermometer has been much neglected in the investigation of disease, we must remember that great caution is required in its employment. Errors may be easily committed, partly owing to imperfections in the instruments, and partly to *want of care in the observer*; and as the variations in many diseases are very slight, and the laws which regulate these variations not accurately determined—for even Dr. Roger's results are based upon averages—it is obvious that the thermometer can hardly be brought at present into extensive employment among practical men. By these remarks we do not intend to disparage the labours of Dr. Roger. On the contrary, we think his work on the temperature of infants highly creditable to him both as a physiologist and pathologist. Like all inquirers on special subjects, he is desirous of making his views extensively applicable to practical purposes: but he differs from many in having candidly given the whole of the details of his experiments and observations, and in having thus challenged a fair comparison between his facts and his conclusions. He does not present himself to us as a mere theorist, but as one wishing to benefit his profession by philosophical research. We shall conclude by observing, that we have derived great satisfaction from the perusal of his treatise, and confidently recommend it to our readers.

A Hand-Book for Bathers, or Hints on the various kinds of Baths. By a MEDICAL MEMBER OF HER MAJESTY'S HOUSEHOLD. Small 8vo. pp. 47. London: E. Churton. 1846.

THIS is a well-written little pamphlet. It contains nothing new, but there are scattered through the pages many useful hints to medical practitioners respecting the various kinds of baths, and the different states of the body under which they may prove beneficial or injurious.

In treating of cold bathing, the author makes the following judicious remarks on its gross misapplication under the name of hydropathy.

"Cold bathing has of late years assumed a more important attitude, and under the name of the cold water cure, or hydropathy, it has been pronounced a sovereign remedy for all diseases. In this opinion no reflecting person can concur. Undoubtedly it has often been productive of benefit by the stimulus it imparts to the nervous system, and the habits of personal purity it engenders. The wholesome exercise, pure air, abstinence from alcoholic fluids, care, anxiety, and other exciting as well as depressing agents; moderate and regulated diet, and the unadulterated nutritious simple food, which are usually to be found, or are prescribed in or around the rural establishments in which hydropathy is practised, are also material if not main elements in the cure, and have frequently been highly advantageous in cases where the health has been injured by the luxurious, noxious habits, corroding thoughts, and unwholesome atmosphere of crowded cities; but in other instances the indiscriminate application of the system in the various forms of sitz-bath, douche bath, wet sheets, 'packing cases' (or damp blankets, &c.), and the innumerable other forms in which it is prescribed, have as often been productive of injurious if not fatal results. Many a consumptive patient or person of weak constitution has thus been hurried to the tomb; and without any sweeping denunciation of the practice; but, on the contrary, admitting that in many cases it may prove beneficial—as one baronet (Sir Francis Burdett), who during his lifetime was the patron of a thousand quackeries fell a victim to it—we are not disposed to concur in the emphatic declaration of another (Sir Lytton Bulwer) that "*The wet sheet is the true life-preserver.*" Fancies vanish, novelties decay; some new species of excitement or charlatanism is always found to amuse the public or dupe the credulous; but reason and nature remain always the same, and, while they endure, cold water will never be considered a cure for all the afflictions which humanity inherits" (p. 17).

The importance of the warm bath in the treatment of many diseases of children is well known, but we doubt whether certain rules which are necessary to its beneficial employment are sufficiently attended to in practice.

"On these occasions no time should be lost in immediately plunging the child into a warm bath, in which it may with benefit remain for two or three minutes, but rarely more than five, in consequence of the danger that might ensue from the stimulus thus afforded to the affected vital organs within. On removing the child, it should be carefully dried and wrapped in a blanket warmed to equal heat, to protect it from exposure to cold. The temperature of a bath for children of this tender age should on no account exceed 96°, as their skin and constitution are not only more irritable than in adults, but the vital powers are also less. Generally from 92° to 94° of Fahrenheit's thermometer will be found a safer range; and a tepid bath, varying from 92° to 85°, may afterwards be substituted, gradually diminishing to a *temperate* one at 85°—75° and from this *reduced* to cool at 75°—60°, beyond which
the temperature of baths for youth
or seven years of age should never
minished when applied to the body g
though it may often with advantage
duced much lower when applied to
lar parts, as the hands, face, and fore

The pamphlet concludes with
cism on Mr. Lane's work on
pathy, lately reviewed in this jo
and an appendix on the art of
ming.

The extracts which we have
made will enable our readers to
of the mode in which the autho
with his subject.

Proceedings of Societies.

BRITISH ASSOCIATION.

On the Diseases resulting from the I
rate Use of Tobacco. By T
Laycock, Physician-Accoucheur
York Dispensary, and Lecturer
Theory and Practice of Medicine.
ing some Results of Experiments
Physiological Action of Tobac
Samuel Wright, M.D. Physi
Queen's College Hospital, Birmingh
[Communicated by the Author.]

The widely extended habit of smoki
snuffing tobacco immoderately has
had that attention paid to it in in
tions into the ætiology of disease
deserves. It is only by personal
vations made during the last two
years that I have become fully aware
great changes induced in the system
abuse of tobacco, and of the vari
obscure form of disease to which es
excessive smoking gives origin; and
propose to state some of the results a
I have arrived.

The consequences of smoking tob
manifested in the buccal and pha
mucous membrane, and their diver
on the stomach, the lungs, and the
and on the brain and nervous
With regard to these consequences,
be generally stated here that the
according to the quantity of tobacco s
and according to the pathological con
and peculiarities of the individual h
Some persons will smoke a very large
tity before certain symptoms arise,
others experience these with a very
quantity. The amount consumed
bitual smokers varies from half an o
twelve ounces per week. The
quantity is from two to three

---

* See page 498.

te cigar smokers will consume from
five dozen per week of the lighter
cigars, as Manillas, Bengal che-

irst and simplest morbid result of
smoking is an inflammatory con-
the mucous membrane of the lip
gue, and this sometimes ends in a
n of the epithelium. Then the
nd pharynx suffer, the mucous
e becoming dry and congested.
roat be examined it will be observed
ghtly swollen, with congested veins
ng over the surface, and here and
treak of mucus. The inflammatory
so extends upwards into the pos-
res, and the smoker feels from time
a discharge of mucus from the
rt of the pharynx, in consequence
retion from the mucous membrane
res collecting within them. Some-
anterior nares suffer, but in this
rritation is not marked by increased
so much as by tickling and itching
em. The irritation will also pass
onjunctiva (and I am inclined to
m the nares, and not by the direct
n of smoke to the eye), and the
e, heat, slight redness, lachryma-
a peculiar spasmodic action of the
s muscle of the eye, experienced,
rith intolerance of light, on awaking
p in the morning.

the frontal sinuses do not escape,
d that one of the symptoms very
experienced after excessive smok-
heavy dull ache precisely in the
these sinuses. But, descending
alimentary canal, we come to the
and here we find the results to be,
e cases, the symptoms of gastritis.
pain and tenderness on pressure of
strium, anorexia, nausea on taking
constant sensation of sickliness
to expectorate.

tion of the heart and lungs is
y the influence of the narcotic on
us system, but a morbid state of
, trachea, and lungs, results from
action of the smoke. The voice
d to be rendered hoarser, and with
tone; sometimes a short cough
and in one case that came under
ulceration of the cartilages of the
s, I felt quite certain, a conse-
excessive use of tobacco. This
had originally contracted the
moking when a sailor, and it had
inveterate that he literally was
hout a pipe in his mouth except
ng or sleeping. If he awoke in
he lighted his pipe: the moment
d a meal he did the same. It is
xtreme cases like this that the
can be *fairly made* as to the morbid results of the habit, because there are so many other causes of disease to be estimated at the same time. This particular instance has, however, during my experience, been corroborated by others of a like kind, and I have come to the conclusion that inflammation and ulceration of the larynx in men are almos exclusively peculiar to the slaves of excessive tobacco-smoking.

Hæmoptöe is another morbid condition distinctly traceable to this habit. The patient experiences a slight tickling low down in the pharynx or trachea, and hawks up rather than coughs up a dark grumous-looking blood. I have not been able to ascertain whence this comes. I have known it to flow out of the patient's mouth during the night, or to be effused shortly after lying down. It is a symptom worthy especial notice, however, because it gives great alarm, and may be readily mistaken for pulmonary hæmoptysis, or an expectoration of blood.

The action of tobacco-smoking on the heart, so far as I have observed, is depressing. The individual who, from some peculiarity of constitution, feels it in this organ rather than elsewhere, usually complains of a peculiar uneasy sensation about the left nipple—a distressing feeling—not amounting to faintness, but allied to it. In such an example no morbid sound can be detected, but the action of the heart is observed to be feeble, and slightly irregular in rhythm; yet not always so in the same person. An uneasy feeling is also experienced in or beneath the pectoral muscles but oftener, I think, on the right side than on the left.

On the brain the action of tobacco-smoking is sedative. It appears to diminish the rapidity of cerebral action and check the flow of ideas through the mind. This, I think, is a certain result; and it is in consequence of this action that smoking is so habitual with studious men, or men of contemplative minds. The phrases, "a quiet pipe," or a "comfortable cigar," are significant of this sedative action. It differs, however, in kind from that of opium or henbane, because, as a *general* rule, tobacco does not dispose to sleep: it may in *individual* instances, but not generally, with tobacco-smokers. On the contrary, it rather excites to watchfulness, and in this respect is allied to green tea in its action; or, if not to wakefulness, to dreams, which leave no impression on the memory. When this effect has passed off there appears to be a greater susceptibility in the nervous centres to impressions, as indicated by trembling of the hands, and irritability of temper.

There are a few facts which I would now

state generally, and which appear as secondary results of smoking. Constipation and hæmorrhoids are often experienced by inveterate smokers. Acne of the face I have observed to be excited and kept up by the habit, and to disappear with the discontinuance of the latter. Blackness of the teeth and gum-boils are not uncommon results. There is also a sallow paleness of the complexion, an irresoluteness of disposition, a want of life and energy, to be observed occasionally in inveterate smokers, who are content with smoking,—that is to say, who do not drink. I have suspected also that it has induced pulmonary phthisis. It is thought that the sexual energy is impaired by the habit, but on this point I have no facts to detail.

The statements just made are entirely derived from my own observation, but having learnt, after having drawn up the outline of this communication, that Dr. Wright of Birmingham had paid considerable attention to the subject, and had written a prize essay on the effects of tobacco, I ventured to ask for any information he had collected, stating to him in a few words some of the course of my own observations. Dr. Wright very kindly transmitted a short extract of the results both of his observations and experiments, with a permission to use it in any way I thought fit. As it is short as well as interesting I will add it at length.

Dr. Wright's observations.

The watery infusion of tobacco, whether administered by the mouth or the rectum, or injected into the arteries or the veins, produces, in animals, all the effects of direct sedative action upon the nervous system. As is usually the case under such circumstances, the heart is the organ which chiefly shows the influence of the depressing agency. Its beats invariably lessen in force, but they sometimes become more frequent, at other times more slow; and again, irregularly intermittent. Not always, however, does the heart chiefly indicate the sedative action of tobacco. I have seen, in the dilated pupil, the relaxation and helplessness of limb, the involuntary dribbling away of urine, and escape of fæces, proof enough of extreme prostration of strength, whilst the heart has been proportionately only mildly affected. As far as my own experience goes, there is no truth in the notion that the sedative action of tobacco is due to its lessening the force and frequency of the heart's action. Its influence is directly upon the nervous system, and indirectly on the chief organ of circulation.

The action of tobacco on man seems to be precisely the same as on the inferior animals. I have never been able to discover that it is capable of affecting the brain, as an intellectual organ, otherwise than through its sedative action. My observations and experiments have all tended to prove, that, when the intellectual function suffers from the action of tobacco upon the system, it is due to some error of circulation consequent upon the depressing influence of the drug. The most extreme prostration, however, may be produced, without the processes of intelligence being much affected. I was once hastily summoned to see a man, said to be dying; and, in truth, he was in a most complete state of collapse. He was cold all over, pallid, and covered with a cold sticky sweat: pulsation was imperceptible in the radial or temporal artery, the heart's sounds were inaudible even to the stethoscope, and the only proof of vitality not having left was a deep sigh drawn every fifteen or twenty seconds. I learnt that the poor fellow had been induced to sit over a chamber-pot containing half an ounce of tobacco, with some burning coals thrown upon it, to ease himself of piles. He had sat for a few minutes, and at last fell off in the prostrate condition I have described. The treatment consisted in pouring brandy down his throat, applying strong friction over the neighbourhood of the heart, and putting his feet into hot mustard and water. In a short time reaction came on, and recovery was finally complete. I was assured by this man, that, amid his utter powerlessness, he was perfectly sensible, during the greater part of the time, of all that was passing around. In proof of this, he related most of the conversation that had occurred concerning him.

According to my own observations, the essential oil of tobacco obtained by ether produces all the physiological effects of the watery infusion. Any stimulant action that may be produced by the empyreumatic oil is due to some stimulating material engendered by the elevated temperature.

In giving to dogs small quantities of tobacco, of from two to five grains, twice or thrice daily, mixed with their food, the result was a slow declension of nervous power, ending in complete marasmus and starvation. In particular, I remarked an intermittent action of the heart, habitual dragging of the hind legs, a seeming loss of venereal power, and a total disinclination for sexual intercourse. The testes became soft and shrivelled, and the muscles of voluntary motion underwent the same change. The hair at first became rough, and then it fell off; the pupils enlarged, and the eyes swam with tears, succeeded finally by purulent and ichorous discharge. Sloughing of the eyelids, and blindness, generally preceded death. After death, the blood was invariably found fluid, deficient in fibrin, and particularly so in red globules: the heart was pale, soft, and smaller than natural: the body never stiffened, and decomposed very rapidly. The gums began to swell and bleed early in the experiments, and the teeth loosened, and sometimes dropped out. The mucous membrane of the mouth, nose, and trachea was softer, more tumid, and more vascular than usual.

In carefully watching the effects of the excessive or long continued use of tobacco upon the human subject, I am not able to fix upon any that are not due, immediately or remotely, to the physiological influence above noted. To this cause I attribute many disasters I have known to succeed an extravagant use of tobacco by individuals of strong, hearty, nervous temperament, and a more moderate use of it by subjects physically less favoured. The nervous system, as I have said, has peculiarly suffered; and thence have arisen obtuseness in the functions of the several senses, irritability, indecision, and loss of courage, or of determination of action, weakness of the muscles of voluntary motion, and depravity of the secretions. Particularly have I observed the buccal membrane (in smokers) to become vascular, swollen, irritable, and prone to hæmorrhage. I have never observed an exception to the fact that in smokers the voice has deepened in tone (I suppose from relaxation), or become hoarse or oppressed through excessive mucous secretion. Many an irritable nervous cough, without increased secretion from the tracheo-bronchial membrane, and many a cough dependent upon increased secretion, have I known to follow the frequent use of tobacco in smoking. I believe it to be a great antagonist of the functions of the nervous system, especially in its relations to the organs of sense, of reproduction, and of digestion. I think I have known it produce perfect atony, with all its train of consequences. I have known many instances in which I was unable to prove that the ordinary use of tobacco did any harm; I have known many more in which I could prove that it did do harm; and I have not known any good from it that might not have been obtained from less objectionable means.

It will be seen that Dr. Wright corroborates my observations in several particulars, and although I am not at all desirous that this communication should be considered as a "counter-blaste" to tobacco, I think the inveterate habit of smoking, snuffing, or chewing that drug is worthy the special notice of physicians and practitioners in medicine in general, as a very frequent but unconsidered and *unthought of cause of* *isease. I am quite certain, indeed, that if* the practitioner habitually direct his attention to the subject, he will find that many obstinate and difficult cases may be elucidated by applying and extending the views detailed as well by Dr. Wright as myself.

Gastric disorders, coughs, and inflammatory affections of the larynx and the pharynx, hæmoptöe, diseases of the heart, and lowness of spirits, are the principal diseases in which the pathological results of the habit are to be looked for. The colour of the teeth, a pearly blueness of the lips, a slight trembling of the hands, and a quiet passive expression of countenance, are the most usual marks of the habit itself, and when present in any obstinate or anomalous disease, whether of the respiratory, circulating, alimentary, or nervous system, would warrant a special inquiry as to the habits of the patient in the use of tobacco. In all cases the quantity of snuff used, or tobacco smoked, per diem or per week, should be ascertained, as patients are apt to say they only smoke a little; meaning, if pressed, that they smoke from half an ounce to an ounce of tobacco per diem; and the same with snuff. Whether it is advisable to forbid the use of the drug altogether is doubtful. There appears to be an instinctive craving in man for things which act on the nervous system; and I think the better policy in all cases of this kind is to denounce the abuse rather than the use, even if we wish to obtain their disuse.

On the differences in the physiological actions of the yellow and red Prussiates, as an evidence of their containing dissimilar radicals. By H. Letheby, M.B. Lecturer on Chemistry at the London Hospital. [Communicated by the Author.]

In the course of his inquiries into the action of the various compounds containing cyanogen upon the animal body, the author was particularly struck with the dissimilarity in the effects of the yellow and red prussiates of potash, one being altogether inert while the other acted as an energetic poison. This led him to inquire into the effects of the yellow and red prussiates of other bases, and also into the physiological actions of the various simple and double cyanides. In all these experiments the compounds were dissolved or mixed with water, and injected into the peritoneal cavity, so as to obviate any fallacy which might arise from the action of the gastric juice upon them. The following is a summary of the results:—

1st. The *simple cyanides* are energetic poisons, producing effects similar to those of Prussic acid; the soluble ones acting immediately, the insoluble ones in a longer time.

2d. The *double cyanides*, as of potassium, with silver, zinc, nickel, and a mixture of cyanide of iron and cyanide of potassium, in the proportions to form the yellow prussiate, were found to be equally active as poisons.

3d. The *yellow prussiates (ferrocyanides)*, as of potassa, soda, ammonia, zinc, lead, silver, and iron, were found to be inert.

4th. The *red prussiates (ferridcyanides)*, as of potash, lead, and silver, proved to be active poisons.

5th. The *white crystalline acid (ferrocyanic)*, obtained by the action of muriatic acid and ether on yellow prussiate of potash, or by sulphuretted hydrogen on the lead salt, was not immediately fatal, but required a time varying from half an hour up to two hours before it killed,—the animal dying as if from the decomposition of the acid and the slow liberation of Prussic acid.

6th. A *red crystallized acid (ferridcyanic)*, obtained by treating the red prussiate of potash with ether and muriatic acid, acted upon the animal immediately, producing death in times not exceeding ten minutes.

These facts seem to give a confirmation to the views of Liebig, that the yellow and red prussiates are not compounds of two cyanides, but that the elements are arranged so as to form dissimilar radicals, whose property it is to unite with bases on the one hand to form salts, and with hydrogen, on the other, to form acids. That such is the case, and that they are dissimilar, may be argued from the following :—

(*a.*) None of the double cyanides exhibit the peculiar chemical reactions or permanency of the yellow and red salts.

(*b.*) Acids may be obtained from these salts, possessed of strong acid properties, decomposing carbonates, and exhibiting the peculiar chemical and physiological actions of their salts.

(*c.*) These acids are decomposed by the oxides of the metals forming salts in which their hydrogen has been replaced by a metal.

(*d.*) The double cyanides are poisonous, the ferrocyanides are not.

(*e.*) And that these radicals are dissimilar is shown by the marked difference in their chemical and physiological reactions.

MEDICAL SOCIETY OF LONDON.

Monday, Sept. 28, 1846.

MR. DENDY, PRESIDENT.

THIS was the first night of the session. The attendance of fellows and visitors was unusually large. The meeting-room of the Society has been much altered and improved, and the introduction of gas has given a lively and pleasant appearance to the apartment.

On taking the chair, the president gave a brief inaugural address. He said that this was the commencement of the seventy-third session of that, the oldest medical society in the metropolis, and the parent of all other similar institutions in London. He dwelt on the usefulness of the Society, and the benefit it had afforded to science by its Transactions and discussions. He showed that it had maintained the dignity of the professional character, and had always been the determined opponent of quackery, in whatever shape it might present itself. He urged the fellows to renewed exertions, and concluded by congratulating them on the prosperity of the institution.

A paper was read by Dr. HUGHES WILLSHIRE, entitled, "On a New Era in Therapeutical Inquiry," but which from the nature of the subject can scarcely be abstracted from or condensed. The great endeavour of the author was to show, that comparatively with other branches of the science of medicine, therapeutics had but little advanced in progress towards the establishment of fixed and generally believed-in principles; that our time having been so exclusively occupied with morbid anatomy, transcendental physiology, and more lately, the mysticisms of the German schools of chemistry, this was scarcely to be wondered at; but that the time had now arrived when we were urgently called upon to devote our energies to the firm establishment of great and leading principles of therapeutic action. This was rendered the more necessary, from the fact that the various *illegitimate* branches of art flourished in the discrepancies found to exist in the therapeutics of legitimate medicine. The author reviewed the various modes of curative procedure which had been adopted or recommended in pneumonia, syphilis, rheumatism, and rheumatic endocarditis; noticed some important changes attempted to be introduced in the practical application of remedial agents, as calomel and opium in inflammation, the value of which, in controlling this morbid action under the circumstances usually believed in as enabling it to do so, being doubted by some late writers; and considered, in detail, some of the reports of certain German hospitals, in which the treatment of severe and important diseases was conducted on the plan of the greatest expectancy of the most expectant school. In concluding, the author stated his belief, that the coming epoch in the history of medicine must be one characterized by the attention paid to the establishment of a great system of therapeutics; that we now knew sufficient about the morbid anatomy and chemistry of disease to entitle us to relax somewhat our too exclusive attention to these subjects, and to devote the whole of our energies to the great object under discussion.

discussion which ensued, and which
orted by Mr. Headland, Dr. Gold-
l, Dr. Theophilus Thompson, Dr.
, and Dr. Risdon Bennett, it was
d that, however imperfect was the
knowledge in reference to thera-
it could not be denied that the ad-
ade in pathology, morbid anatomy,
hemistry, and the collateral branches
cine, had wonderfully improved our
lge of disease, and of the means of
g it. With respect to the improve-
'our knowledge of therapeutics, from
ly and observation of cases occurring
ractice of those whose plan of treat-
nsisted in the "greatest expectancy
ost expectant school," it was to be
ered, that the records of cases spring-
a this source were not only occasion-
e, but, when true, were so imperfect
atisfactory that no just conclusions
drawn from them. So many "false
tended to embarrass and obstruct,
han to assist us in our progress, and
it could not be doubted that the *vis*
rix Naturæ had often a wonderful
tive power in disease, it would be
l in the practitioner of legitimate
s to stand by and see an acute disease
g his patient to the grave, without
to his aid those efficient means and
s which science and experience had
him to be those most likely to arrest
gress of the malady.

Correspondence.

CASE OF ILIAC ABSCESS.

—Having seen in your journal of
h inst. the reports of the extremely
ting cases of chronic abscess, by Mr.
, I am induced to send you the
t of a case which has lately fallen
my notice, and which confirms Mr.
's remark, that "iliac abscess may
nsequence of disease in the hip."

I am, sir,
Yours obediently,
H. Smith, House-Surgeon.

's College Hospital,
ptember 21, 1846.

an, æt. 35, was admitted into King's
Hospital with an obscure swelling
right iliac region, accompanied with
pain about that part as well as the

disease was considered to be a
ion of fluid in the bursa underneath
ndon of the iliacus muscle. Although
had been some indistinct *symptoms of
lisease some time previous to his* admission, they were by no means striking at this time. There was not the least evidence of disease of the vertebræ.

The swelling greatly increased in the iliac region, and involved the parts below Poupart's ligament and the upper third of the thigh.

At the end of a few weeks, fluctuation being evident, an incision was made into the tumor, and a large quantity of pus evacuated.

Shortly afterwards hectic set in, and in a few weeks the man died.

On making a post-mortem examination an enormous abscess was found in the right iliac region, extending upwards in the course of the psoas muscle to the upper lumbar vertebræ, and downwards, under Poupart's ligament, as far as the middle third of the thigh, where all the tissues were much disorganised. In addition to this, the head of the thigh-bone was found much flattened and absorbed, and dislocated on to the dorsum of the ilium, having formed for itself a shallow socket. The acetabulum was much diseased, carious, and deprived of its cartilage.

It is highly probable that the primary disease in this case was that of the hip, as the symptoms previously experienced justly indicated, and that subsequently the matter had spread from the joint amongst the muscles and cellular tissue of the pelvis.

THE CONTAGION OF CHOLERA.

Sir,—With reference to the remarks which appeared in your last number on the Infectious Nature of Pestilential Cholera, kindly permit me to quote the following from "The India Journal of Medical Science," May 1835, page 171.

"With regard to cholera ever becoming contagious in this country (India) there may be some difference of opinion; but if by contagion we mean a morbid poison, generated in one body, which when conveyed to another through the medium of the atmosphere excites a like disease in it, provided the person is predisposed, and the epidemic constitution of the season or locality favours it, *but not otherwise*, I am now inclined to believe it is occasionally contagious. Plague itself is only thus contagious. No disease, the exanthemata excepted, appears to be in any degree contagious in this country, unless under the most favourable circumstances, and therefore very unequivocal proof can seldom be looked for. What struck me was the following circumstance. In June 1833, when nine cases were admitted in the course of a few hours," &c.

No doubt contagion or infection at that time was deemed somewhat apocryphal, though now it is generally acted upon, more or less, in the Bombay Command at least. Of late years, however, or since about 1839, when large bodies of troops began to be moved in consequence of the late wars, cholera had been much more virulent than formerly, and also more frequently followed by that low congestive fever noticed in its course throughout Europe.—Believe me,

Very truly yours,
R. H. A. Hunter,
Surgeon 57th Regiment.

Chatham, Sept. 22, 1846.

ON THE TREATMENT OF ASIATIC CHOLERA.

Sir,—I have just noticed in your journal of the 21st ultimo, the observations of Mr. French on cholera, in which Mr. F. has made use of my name and opinions. He observes :—" In order to show the extraordinary effect of what I must be permitted to call prejudice on the mind, I will quote the case and opinion of Mr. Searle, who was attacked with the disease in India, and wrote a book on the subject." Quoting from my book some of the particulars of my case, in which I mention having taken both ammonia and brandy, and finding no relief of the præcordial oppression, I mention having subsequently taken cold water with great comfort, Mr. F. arrives at once at the conclusion, that it was to this circumstance alone that relief was afforded; and that I was prejudiced by a preconceived opinion in favour of stimulants to recommend them afterwards in my work.

Allow me now to quote my case a little more in detail than Mr. F. has done. Ten minutes after an act of vomiting, I took 10 grains of carbonate of ammonia, with one drachm of magnesia, and three drachms of sulphate of magnesia dissolved in three ounces of water. Observing : " this induced an agreeable feeling of warmth in the stomach, but no expulsion of flatus, nor did it afford any relief to the præcordial oppression, which continued unabated. Another evacuation from the bowels now took place, and soon after a desire was felt, but being uncomplied with, the stomach became again sympathetically excited, and the draught which had been retained now about a quarter of an hour was thrown off much diluted with a colourless fluid, and tasting strong of the ammonia. Vomiting was in this instance attended with a little perspiration, and there was a little relief of the præcordial oppression. A few minutes afterwards a couple of clysters of salt water were thrown up the bowels, which were succeeded by a copious fluid evacuation; this afforded slight but sensible relief to the abdominal oppression. The præcordial oppression being still great, the clysters were repeated, *and continued* at short intervals, as they were generally succeeded by evacuation, which always afforded more or less relief. As the abdomen felt hot to the hand, and there was some thirst now experienced, with desire for cold drink, a wine-glassful of cold water was taken, and repeated every half-hour with great comfort, and no subsequent vomiting. The warm salt-water clysters at short intervals, with cold water for drink, were continued from this time with progressive relief to the præcordial oppression, which still continued considerable, and with general amendment. Some hours after, an increase of thirst being experienced, with febrile heat of the extremities, a drachm of Cheltenham salts in four ounces of water was taken, and repeated every two hours instead of the clysters, with cold water in quantities of a claret-glassful ad libitum ;" from which, and after a few doses of calomel, I got well.

I subsequently add : " During the whole of the time being in possession of my senses, the remedies taken were dictated more by my feelings than any preconceived opinion, which soon convinced me the præcordial oppression was from the congested state of the vessels of the stomach and bowels, as the stimulants I took in the first instance afforded me no relief in this particular; whereas the evacuations invariably did so, more or less. The irritating clysters were therefore obviously indicated, not only with this intention, but in relief also of the stomach, which was twice suddenly excited to vomiting by restraining the action of the bowels. The latter, therefore, I consider a most obvious curative indication—indeed, I felt this so much to be the case that I pursued the hint, and have reason to suppose my rapid recovery attributable to it. Had I, on the contrary, restrained this by opium and stimulants, which has been too commonly the practice, inflammation would have become developed, with its attending symptoms—burning heat and extreme irritability of stomach, restlessness, and so forth; or spasms with their exhausting influence; or the absence of these symptoms, and the non-development of excitement from cerebral congestion."

Compare these quotations with the following observations of Mr. French, "Thus, then, we find the following facts :—A man with cholera, capable of judging of his condition and the effect of remedies, takes brandy and water, and finds no relief; ammonia, no relief; cold water, great comfort and progressive relief; restrains himself to cold water, and gets well. Yet this gentleman, sitting in judgment on all other patients, condemns them to brandy and water, mulled wine, æther, ammonia, every quarter of an hour."

Now, Sir, with the quotations I have

en from my work, is it just of Mr. ach to pass upon me so sweeping a con- onation, and say that I am prejudiced avour of stimulants, because I have sub- uently recommended them in the fulfil- nt of certain obvious indications in the ly or cold stage of the affection? That mistake may occur, let me here again te what I have said on the subject. At o 98 I have said:—"The indications of atment are to remove the first stage of pression, which my explanation attributes suppression of power and venous conges- n, by remedies both stimulant and cuating. Then follows, on its superven- n, the moderating the second stage of itement by remedies more particularly cuating; and on the third stage of col- se ensuing, the indications are, to allay tation, restrain every debilitating evacua- n, to restore the natural secretions, and husband and support the remaining feeble vers of existence."

And in carrying out these views I ob- ve:—After the operation o a mustard etic, "a warm clyster should be ad- nistered, consisting of a dessert-spoonful table salt dissolved in a pint of warm ter, with a spoonful of oil; and this uld be repeated every half hour, for by s keeping the bowels excited tranquillity the stomach is insured, and the conse- ent retention of our remedies, the chief which is calomel; but as this requires ne time before it can be received into the tem and effect its operation, as the ab- bing power of the stomach and suscep- ility to influence in this disease—the tinguishing character of which is, the duction of all the powers of life—is atly diminished, it becomes necessary to e it in proportionately large doses, and the same time, in aid of its operation, and support of the living powers, to administer o occasional cordials. A scruple of omel placed upon the tongue should refore be washed into the stomach with a le brandy and water; the quantity of the er should at no time exceed three table onfuls, which may be in the proportion one of spirit to two of hot water. If the e is urgent, the same dose of calomel may repeated every hour, otherwise in two ars; or if the patient is much improved, half the quantity, and thus, prolonging interval or reducing the quantity, it st be continued, according to the state of patient, till bilious stools and urine are cuated. The spirit and water or mulled e, or where the system is very low thirty ps of aromatic spirit of ammonia in half ine-glassful of water, may be given every arter of an hour, conjointly with the omel."

I then go on to point out the indications to be fulfilled by blood-letting, observing in continuation, "that the same indications, that is, of relieving the abdominal congestion, is partially fulfilled by the clysters, which are recommended to be continued; but as warmth and excitement become developed, evinced by the desire the patient expresses for cold water, the clysters may be aided or superseded by a weak and cold solution of Epsom salts or cream of tartar, with which the patient may be now indulged every half-hour in the quantity of a wine-glassful at a time, that the stomach may not be oppressed, instead of the cordial, which would now prove injurious!" and cold-water I have subsequently added.

I may therefore be, as Mr. French says, one of the authorities quoted by Dr. Copland, but certainly not in support of the stimulant plan of treatment, in the common meaning attached to stimulants; for calomel is the only one I really recommend, though an occasional cordial I express may be judiciously added, but never in opposition to the dictates of nature as evinced by the feelings of the patient, which I have expressly pointed out demand at all times our utmost respect.

Before taking leave of Mr. French, I may remark that he has omitted to notice the benefit which is to be derived from assisting nature, in relief of the abdominal engorgement (by saline clysters), in the way I have pointed out and so successfully practised in my own case; and to which my recovery with more propriety might be attributed than to the cold water.

Allow me also to point out, that he has not hesitated availing himself of my labours in all that he has said for good. Thus he observes: "I venture to assert that the loss of the heart's power is beyond all comparison the most striking lesion, and that upon it all the phenomena of the disease admit of ready explanation." Now compare this with what I have said. "If my views are correct as to the cause and operation of that cause, the symptoms which ensue are necessarily referrible to the defective excitement of the heart and brain, or principally so; these being the two principal organs, and on which the functions of the others are dependent."

I then proceed to point out how defect in the heart's power is productive of venous congestion, and especially so of the mesenteric and gastric veins forming the roots of the portal vein, and that it is serous exudation from these vessels which gives occasion to the watery evacuations; and, further, I have explained the whole phenomena of the disease: but as this communication has already extended to as great a length as I apprehend you will be willing to give publication to, I shall say no more, after thanking you for your kindness in inserting this.

Your most obedient servant,
C. Searle, M.D. M.R.C.S.E.

Bath, Sept. 26th, 1846.

*** We have taken the liberty of making a few alterations in this letter, which, however, do not affect the arguments of the writer.

NOTE FROM MR. PHILLIPS—THE LONDON AND EDINBURGH PHARMACOPŒIAS.

Mr. Phillips has written to us to complain of a misstatement in the notice of his "Observations," &c. lately published in this journal. We have great pleasure in inserting his remarks in reference to it:—

You assert that "Mr. Phillips appears to have been very successful in entrapping druggists by the use of the words *Hydr. Pot.* in his prescriptions. *Iodide of Potassium* was given to him on three occasions for Hydrate of Potash! Can we be surprised at it?" To this inquiry I answer in your own words, "assuredly not," provided I had written what you aver; for Hyd. Pot. may certainly mean either of the substances in question. If, however, you will take the trouble of referring to p. 50 of my pamphlet, you will find that "I sent to a chemist a written order for ʒss. Potassæ Hydratis;" and in p. 53, I mention that "I presented a paper, on which was clearly written *Potassæ Hydratis*, ʒij."

I need not attempt to decide whether, like yourself, the chemists read Hyd. Pot. instead of Potassæ Hydratis, or, whether, having read it aright, their ignorance "*entrapped*" them into supplying me with iodide of potassium instead of hydrate of potash.—I am, sir,

Your obedient servant,
R. Phillips.

Sept. 28, 1846.

*** The error arose from the label attached by the druggist to the preparation being copied instead of the prescription written by Mr. Phillips. We quote the whole sentence:—"To this person I presented a paper on which was clearly written, *Potassæ Hydratis*, 3ij., and he supplied me with what he labelled *Hydr. Pot.* ʒij. (p. 53). The word "entrapped" was not intended to be employed in an offensive sense. The error does not at all affect our argument as to the impropriety of making frequent scientific changes in the nomenclature of pharmaceutical compounds.

Medical Intelligence.

PROGRESS OF THE CHOLERA IN THE EAST.

The last accounts from Teheran, of the middle of August, state that the cholera had nearly subsided in that capital, and had proceeded thence in two different directions—east and south. The mortality, although great, had not been so considerable as in 1835. Among the victims were an *attaché* of the British Embassy, Mr. Robert Glenn; the Minister for Foreign Affairs of Persia, Abul Hassan Khan; the Minister of Justice, and two or three other functionaries. The epidemy had committed some ravages within a short distance of Tabrez, but had not visited that city.—*Times.*

A DENTIST'S CIRCULAR.

The following circular has been forwarded to us by three different correspondents, each of whom was favoured with a copy by the dentist who is so ready to come to a perfect understanding with medical gentlemen. Mr. Wilson proposes twenty per cent. on *living* patients: this is more liberal than the funeral omnibus proprietor, the introducer of what the *Quarterly* denominates a *cruelty van*, with a long boot under the driver for the coffin, and a posse of mourners crammed into the Clarence behind, all drawn along by one poor horse at a very respectable trot! If we remember rightly, medical men were to receive not more than ten per cent. for every *dead* patient recommended by them for this mode of transport to his last resting-place. We doubt whether the *auri sacra fames* prevails so intensely in the profession, as to render it probable that any of its members will disgrace themselves by accepting either a dental or funeral per centage on their patients' teeth and bodies; but the mere fact of such circulars being sent to practitioners is a sad proof of the corrupt view of the profession entertained by certain individuals.

"Mr. Wilson, surgeon-dentist, being sensible of the obligations he is under to many of the medical profession, is desirous in future of allowing twenty per cent. upon all payments made by persons recommended by them, which will be punctually remitted by post-office order, or otherwise, immediately upon their receipt.

"Mr. W. thinks it proper to observe, that a card or note, with name and address *in full*, from any medical gentleman, will always be perfectly understood by him.

"17, George Street, Hanover Square,
September 16th, 1846."

THE LEICESTER INFIRMARY.

At the annual meeting of the subscribers to this infirmary, lately held, a Committee was appointed upon the motion of Mr. T. Macaulay, to consider and report upon the best means of advancing the interests of the institution. To the resolution there was originally appended these words—"the advancement of medical and surgical science;" but an amendment was moved, and ultimately carried by a majority of 22 to 20, that these words should be omitted from the resolution. The subscribers thus adopted the view, by a small majority, that infirmaries are not intended "to support the interests of medical and surgical science." In reference to the rejection of this part of the resolution, the *Leicester Journal* truly observes—"To cure disease and mitigate suffering are undoubtedly primary objects. But we cannot help thinking that, as schools of study and arenas of practice, all such establishments are fully entitled to be considered objects of great importance. They are, we opine, established as much for the general good as the individual; and surely there can be no better mode of promoting the general good than by extending the means of gaining medical knowledge through their instrumentality. Were the same argument universally to be applied, where would be found the opportunities for the rising generation of medical practitioners to study acute disease, to investigate morbid affections, to witness difficult, or assist in peculiar and delicate surgical operations? Were the doors of every Institution of a similar character closed, upon the narrow principle that they were never intended as schools for the advancement of medical and surgical science, we do not hesitate to say that the world would be overrun with empirics and quacks, and that no man's life would be safe in the hands of any general practitioner. We hold that our public hospitals are the safeguards of the people. We are now discussing not the particular case, but the general."

ROYAL COLLEGE OF PHYSICIANS.

At the *Comitia Majora* held on the 30th ult., the following gentlemen received the licence to practise in London, and were admitted members:—Richard Quain, M.D. (Lond.), Gower St.; Willoughby Marshall Burslem, M.D. (Edin.), Chester Place West, Chester Sq.; Protheroe Smith, M.D. (Aber.) John Street, Bedford Row; William Francis Chorley, M.B. (Cantab.), Leeds.

DEATH OF M. C. DEROSNE.

We have this week to record the death of M. Charles Derosne, a Member of the Royal Academy of Medicine, whose researches in chemistry, especially that department known s organic chemistry, had long since gained or him a European reputation. The principle, narcotine, was discovered by Derosne o exist in opium so long back as 1804, and is was among the first of the brilliant discoveries which *paved the way to our knowledge of the extensive class of vegetable alkaloids.*

Selections from Journals.

CHEMICAL PATHOLOGY.

ON THE PRESENCE OF SUGAR IN HEALTHY BLOOD.

BY M. MAGENDIE.

For some years past the attention of chemists has been directed to the remarkable property possessed by certain organic substances, of acting in the manner of ferments on other organic substances—and of transforming them into proximate principles such as glucose, dextrine, sugar of milk, lactic acid, butyric acid, &c. Numerous facts of high interest to physiology, especially in relation to the changes undergone by starch during the process of digestion and assimilation, have been latterly furnished by MM. Payen, Bernard and Barreswil, Bouchardat, Mialhe, and others*. Among these facts, there is one which now seems to be generally admitted as proved, namely, that mixed saliva, the pancreatic fluid, and the gastric fluid, when alkaline, have each the property of converting by *catalysis* (that is, simply by contact) the starchy principles of food into *dextrine*, and then into grape-sugar, or *glucose*. Having been lately engaged in delivering a course of lectures on digestion, Magendie has repeated the greater number of the published experiments performed by the above-mentioned chemists on this subject. Shortly after commencing his researches, Magendie found that the power of effecting these transformations of starch is far from belonging exclusively to the salivary, pancreatic, and gastric secretions, for he discovered that it was possessed by all the animal fluids which he examined: as the bile, acid urine, the seminal fluid, &c. Moreover, on applying to the different animal tissues and organs the process practised by Bouchardat and Sandras with the pancreas, namely, digesting them separately in water at a temperature of 40° Cent. (104° F.) he found that the filtered fluid, when kept at this temperature, exerted a decided transforming action on starch placed in it. He tried in this way portions of brain, heart, lung, liver, kidney, spleen, muscle, membrane, &c. &c., and observed that they effected the transformation with different degrees of energy and rapidity; yet as to the fact of their transforming power there could be no doubt. Among the various animal fluids which he found to act on starch, serum of the blood was one. On mixing a portion of starch with fresh serum at a temperature of 104° F., he found that in a few moments this substance could no longer be detected by its ordinary tests, and at the end of about a quarter of an hour the mixture quite manifestly contained sugar, and an insipid mucilaginous substance which was converted into sugar by the action of acids and by alkalies, and which was nothing else than dextrine. Blood itself, immediately after being withdrawn from a vein, possesses the same transforming power over starch: if to 200 grammes of blood 5 grammes of starch, boiled in 100 grammes of water, be added, the transformation will be found complete at the end of about four hours, and not a trace of starch will be detected in the liquid when deprived of its fibrine, globules, and albumen, whilst the presence of dextrine and glucose in it will be quite evident, and both substances may be easily extracted.

---

* For an account of these researches, see Med. Gazette, vol. xxxvii. p. 788.

Having obtained such results, it appeared to Magendie that it would be interesting to find out whether the blood during its circulation in the living animal possesses the same property of thus acting on starch. In order to ascertain this, he injected a certain quantity of starch-paste into the jugular of a rabbit, which (for reasons presently to be mentioned) had been kept fasting for three days. The blood of the animal was examined previous to the injection, and presented not a trace of sugar. It was examined again immediately after, and not any of the starch which had been poured into it could be detected, by means of iodine; but in place of it there was certain evidence of the existence of sugar. The blood was now analysed from hour to hour, and the quantity of glucose (or grape-sugar) was found to increase progressively for about five hours; after which it gradually diminished, and had disappeared entirely at the end of seven hours after the introduction of the starch into the veins*.

This experiment, which proves the power of the blood to produce, and probably also to destroy glucose, has been repeated, with like results, on dogs. It was also performed on horses, but generally produced such severe disturbance in the circulation, often occasioning death, that no sure result could be obtained: even the introduction of a small quantity of milk into the veins of a horse almost invariably causes death.

MM. Bernard and Barreswil have recently found that after herbivorous animals have fasted for some time the composition of their urine is exactly similar to that of the urine of carnivora*. Acquainted with this fact, Magendie kept fasting for three days the rabbit into whose veins he was going to inject the starch. At the time of the experiment its urine was in consequence acid, limpid, and loaded with urea. When examined a few moments after the injection, it was highly interesting to observe that it had undergone a complete change, having resumed in this short time the character common to the healthy urine of rabbit,—being alkaline, turbid, and containing no perceptible quantity of urea. This result, which was several times verified on rabbits and horses, is one of considerable interest, and tends to prove still more clearly the close connection which evidently exists between the composition of the blood and that of the urine.

The introduction of starch into the blood by means of injection, being, however, an unnatural proceeding, it became desirable to ascertain whether, when taken into the circulation during the ordinary process of digestion, starch undergoes conversion into sugar. To determine this point, a dog was fed for several days exclusively on cooked potatoes, mixed with a small quantity of lard. As soon as its urine became turbid, alkaline, and devoid of urea, some blood was drawn and examined. It was found to possess a notable proportion of glucose, and a quantity of another principle, soluble in water, insoluble in alcohol, and presenting the other characters of dextrine. The urine of this dog, however, contained no sugar; a fact which is important in relation to the etiology of diabetes, inasmuch as it shows that sugar may exist in the blood, yet without being found in the urine. This circumstance was noticed by MM. Bernard and Barreswil on introducing glucose directly into the circulation: the same observers found, however, that when cane-sugar was introduced into the veins, it very shortly appeared in the urine. In the blood of horses fed exclusively on oats, Magendie found both dextrine and sugar, although the urine was acid, clear, and contained urea. He has not yet made the experiment on man, but he considers it tolerably certain that during the digestion of amylaceous principles of food, sugar will be naturally present in human blood. There is reason therefore to suppose, that, although found in the blood of diabetic patients, yet it may also occur in the blood of perfectly healthy persons, as a natural consequence of the digestion and absorption of starch†. The following experiment may serve to show how the applications of chemistry to physiology may still further throw light on some of the mysteries of the blood. If into the veins of an herbivorous animal whose urine is alkaline, turbid, and almost devoid of urea, a certain quantity of recently prepared meat-broth be injected, the urine will in a very few moments assume the character peculiar to the urine of animals feeding on animal food; that is to say, it will become limpid, acid, and loaded with urea. May one not conclude from such an experiment, that the presence of urea in the urine is dependent on the composition of the blood, and that the origin of this substance is not always the one usually attributed to it?—*Comptes Rendus*, 27 Juillet, 1846.

---

* In order to detect the presence of sugar, Magendie states that the blood is to be received into boiling water, which separates and coagulates the albumen and serum, and takes up the soluble principles: the liquid is then filtered, rendered neutral by a few drops of acid, evaporated, and treated with alcohol, &c.

* See MED. GAZETTE, vol. xxxvii. p. 870.

† To prove that the digestion of starch may occur quite independently of being acted on by the pancreatic fluid, Magendie had the pancreatic ducts in a pigeon destroyed, and after six weeks had the bird killed in such a way that its blood was all preserved. Previous to its death

SURGERY.

INTESTINAL FISTULA CURED BY COMPRESSION. BY DR. O'FERRALL.

A WOMAN, aged 37, admitted into St. Vincent's Hospital, April 10th, 1845, had been ailing for some time with debility, a feeling of drowsiness, &c., but without any symptoms so urgent as to induce her to apply for medical assistance, when suddenly, about two years ago, she was attacked with a severe pain immediately below Poupart's ligament, on the left side. She does not recollect whether, at the time she was thus seized, she was making any exertion. The pain continued for some hours, and she then perceived a tumor about the size of a hen's egg in the same situation. She immediately applied a hot poultice to this lump, and in less than twenty-four hours it ceased to be perceptible, and every uneasiness had disappeared. She positively states that she had alvine evacuations both immediately before being attacked with the pain, and during the period that the tumor existed. She had no nausea or vomiting. On the evening of last Christmas day, about eight o'clock, she was again seized with pain, alike in situation and nature to the former one. This was soon ascertained to be accompanied by a tumor similar to what had before occurred. This time, also, she states her bowels to have been free. The pain diminished in severity, but the tumor continued in the same state until ten weeks before admission, when, one day, in the act of carrying a can of water up stairs, a very violent seizure of pain came on, so severe that she was at once forced to discharge the contents of her stomach, and the vomiting thus commencing continued at intervals for four days. At length she applied for surgical advice, when she was told that she had a rupture, and desired to wear a truss. The part was, however, so tender that she could not bear the pressure of the truss; she was therefore desired to apply leeches to the tumor, and subsequently she continued to poultice it for some time, till at length the lump burst, and a great discharge took place. Under these circumstances she applied for admission into the hospital. She was then found to be weak and somewhat emaciated; complexion pale; nothing abnormal in the appearance or feel of the abdomen; appetite good; tongue clean; frequent desire for drink; bowels *regular*; no pectoral or cerebral symptoms. Just below Poupart's ligament, on the left side, are three small fistulous openings. Upon pressure being made immediately above Poupart's ligament and towards the pubis, a fæculent fluid exudes from these openings: occasionally lumps of fæces, mixed with bubbles of fœtid gas, escape from the three fistulæ. Pressure below Poupart's ligament produces no pain, but a slight pain is experienced when the pressure is exerted above Poupart's ligament and over the pubis. After eating and drinking, she observed the fæculent discharge through the fistulæ always to become increased.

On admission, a poultice was ordered to be kept constantly applied over the fistulæ; and some castor oil was given. After the lapse of a week the openings were freely touched with a solid cylinder of lunar caustic: this was repeated some days. A truss was then attempted to be applied, but no advantage being derived from it a T bandage was substituted, covering a graduated compass, and the patient was instructed how to apply the pressure, chiefly above Poupart's ligament, and over the pubis, and extending towards the fistulous orifices. Under this treatment the discharge diminished, and the openings contracted. May 29, dismissed cured; the fistulæ perfectly cicatrized; her general health much improved.—*Dublin Hospital Gazette.*

COMPOUND DISLOCATION OF THE ANKLE-JOINT—RECOVERY, WITHOUT SUPPURATION OF THE JOINT, IN THIRTY DAYS. BY DR. M. H. STAPLETON.

A MAN, ætat. 40 years, a labourer upon the railway, was admitted into Jervis Street Hospital, on account of injuries suffered by the falling of a large beam of timber. One of the ankles was found in the following condition: the end of the tibia protruded,

---

it was fed on grain, and was in good condition. The blood was found to contain a notable quantity of sugar. The pancreas was in great measure atrophied, and its ducts did not communicate with the intestine. This result seems singular, for one would suppose that a bird deprived of its salivary glands and pancreas would not be able to digest starch; it is proved, however, by the above experiments that bile also acts upon starch, and that when absorbed and carried into the circulation it soon becomes transformed.

with its internal malleolus broken off, and adhering to the deltoid ligament. The tibia was also fractured on its external side, and a small portion remained attached to the fibula. The fibula was fractured about two inches above the external malleolus, and again two inches higher up. The foot was lying on the outer side of the limb, and its sole considerably everted. The patient said he was struck on the outside of the leg by the beam, which thrust the bone through the skin. The reduction was effected after the usual manner, with but little difficulty. The hæmorrhage still continued, although the patient had lost a considerable quantity of blood.

As the external part of the limb had suffered from contusion, and also with a view to arresting the hæmorrhage, Mr. Stapleton determined upon placing the limb in a straight position, with the heel elevated: the hæmorrhage now almost instantaneously ceased: the edges of the wound were then drawn together by slips of adhesive plaster, cut narrow in the part just over the wound, and pieces of lint, soaked in blood, superimposed; the limb was placed in an apparatus with a foot-piece, and side splints applied, &c. A lotion of acetate of lead was ordered to be kept constantly applied. The after treatment consisted of leeching to that part of the limb which had not become ecchymosed (as the application of leeches upon such surfaces has been frequently found to give rise to erysipelatous inflammation; the leeches were also applied in relays, as the author has found such means of application to be more effectual in preventing or allaying inflammation than when they have been applied in larger numbers, but at longer intervals,)—the application of acetate of lead lotion, and administration of small doses of hydrargyrum cum cretâ. On the fifth day after the injury the dressings were removed; no suppuration was found to have taken place in the joint, and the greater part of the wound was united, the remainder granulating. In a month and four days after the receipt of the injury the wound was perfectly healed, and the action of the joint found perfect, when passive motion was applied. So rare is the non-occurrence of suppuration in such cases, that we find mention made of but one where union took place by the first intention, as in the present instance, in Sir A. Cooper's work on Fractures and Dislocations. Dr. Stapleton's patient had always been of most temperate and abstemious habits.—*Dublin Hospital Gazette.*

REDUCTION OF OLD DISLOCATIONS.

Mr. Syme records four cases of dislocation of the shoulder-joint (the forms of dislocation being mentioned only in one), two of which were of seven, and two of four weeks' standing, in which reduction was effected by means of traction by pulleys made in the direction of the long axis of the body. In two of the cases the first attempt to reduce the bone failed, but its return was effected, without much difficulty, upon a second trial. In three of the cases the head of the bone showed great disposition to leave the glenoid cavity after its reduction, but this appears to have been easily prevented by the application of a proper bandage.

Mr. Syme has discontinued the use of bleeding and tartar emetic previously to attempting the reduction of old dislocations, and employs the warm bath alone, as it seems to be sufficient of itself, and has not the disadvantage of being unpleasant to the patient either at the time or afterwards; the others, therefore, had better be omitted. The patients are kept an hour in the bath before reduction is attempted. From the variety of directions which have been adopted by different practitioners for extending the bone, it might seem as if the degree of force were of more consequence than the line of its operation; while the truth, Mr. Syme believes, is, that success depends very much upon the limb being held, during the extension, near the side of the body, so as to relax the pectoral and dorsal muscles which constitute the margins of the axillary hollow.

Mr. Syme also gives a case in which he succeeded in reducing a dislocation of the head of the femur upon the dorsum ilii of five weeks' standing. After the usual preparation in the warm bath, the patient's limb was subjected to extension from the ankle without success, the lever afforded by the foot, for causing rotation, being obviously very inefficient, and the muscles and the back part of the thigh feeling extremely tense. The pulleys were then made to act above the knee, and speedily restored the bone to its place.

A case is also recorded of recent dislocation of the thigh-bone upon the dorsum ilii, where, during the process of reduction, the head of the bone escaped into the ischiatic notch. In more than one instance which has fallen under Mr. Syme's observation, the same change of circumstances occasioned the serious error of supposing that the bone had returned to its proper place, while it had merely shifted into the notch, and as that excellent authority, Sir A. Cooper, though he has warned against the risk of this occurrence in reducing dislocation into the foramen ovale, has not noticed it with regard to the more common case of dislocation on the ilium, or pointed out the deceitful alteration of appearances so induced, Mr. Syme hopes the instance he has related will not be without use.—*London and Edinburgh Monthly Journal.*

EATHS IN THE METROPOLIS

ek ending Saturday, Sept. 19.

	Deaths.	Aver. of 5 yrs.
3	Males.... 417	Males.... 493
2	Females . 446	Females . 475
—	—	—
5	863	968

AUSES OF DEATH.

rages of 5 Summers; Col. B. of 5 Years.

		A.	B.
....	863	898	968
USES	861	892	961
Epidemic, Endemic, tagious) *Diseases* ..		201	188
lic Diseases, viz.—	191		
ncer, &c. of uncer-	101	99	104
al Marrow, Nerves, es	124	155	157
d other Organs of ion	214	227	294
Blood-vessels	29	23	27
Liver, and other f Digestion	80	87	72
the Kidneys, &c. ..	13	6	7
Diseases of the &c.	9	9	10
m, Diseases of the oints, &c.	12	6	6
lar Tissue, &c.	2	1	2
....	45	52	67
Privation, Cold, and rance	41	26	26

g is a selection of the numbers of he most important special cause:

......	4	Convulsions	27
......	6		
......	15	Bronchitis	16
ugh..	20	Pneumonia	30
....	79	Phthisis	132
....	2	Dis. of Lungs, &c.	8
....	34	Teething	5
....	14	Dis. Stomach, &c.	5
ths ..	7	Dis. of Liver, &c.	6
alus ..	23	Childbirth	4
....	25	Dis. of Uterus, &c.	2
....	22		

–The total number of deaths was ummer and 105 below the annual e deaths from infantile diarrhœa the average. The most remarka- ce in the table is, that there were hs from cholera. In the South mortality was above the averages. rs, it was below.

OLOGICAL SUMMARY.

of Barometer ....29·92
Thermometer[a]...........60·3
g do.[b] ......max. 97· min. 54·7
hames water „ 67· „ 63·2

[a] 12 observations daily. [b] Sun.

ches, 0·0: sum of the daily obser- at 9 o'clock.

cal. — The mean temperature of 2·5° above the mean temperature 57·8°). The extreme hebdomadal self-registering thermometer was

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Sept.* 24.—Robert George, Reepham. — William Beresford Chambers Christy, Southsea, Portsmouth. — Frederick Manger, Guernsey. — Francis Smith, Bermuda. — John Rudall Holman Fowey, Cornwall.

NOTICES TO CORRESPONDENTS.

We are obliged to "Medicus" for his letter, but we consider it unadvisable to resume the discussion of the subject at the present time.

We know of no good work on the subject referred to by an "Old Subscriber."

Lately published,

WATSON'S LECTURES on PHYSIC. 2 vols. 8vo. 34s.

TODD and BOWMAN'S PHYSIOLOGY. Parts 1 and 2, 7s. each; cloth, 16s. —Part 3 nearly ready.

BRANDE'S MANUAL of CHEMISTRY. The Sixth Edition will be ready about Christmas.

DANIELL'S CHEMICAL PHILOSOPHY. 8vo. 21s.

BRANDE'S DICTIONARY of MATERIA MEDICA and PHARMACY. 15s.

MAYO on the ORGANS of DIGESTION. 6s. 6d.

MAYO on the NERVOUS SYSTEM. 6s. 6d.

LORD'S POPULAR PHYSIOLOGY. 7s. 6d.

FRECKLETON'S OUTLINES of PATHOLOGY. 7s.

London: John W. Parker, West Strand.

BRANDE'S MANUAL of CHEMISTRY.—In consequence of the great labour required in re-writing this work, for the purpose of embodying the large amount of additional matter which it has been found necessary to introduce, the New Edition cannot be published before Christmas next.

London: John W. Parker, West Strand.

This day, with three Engravings, price 6s.

THE EDINBURGH MEDICAL and SURGICAL JOURNAL. No. CLXIX.

Containing:—Dr. Peacock's Cases of Partial Aneurism of the Heart—Mr. Robertson on Puberty in Madeira—Dr. M'Cormack's Case of Phosphorescence of the Human Body—Mr. Braid on the Power of the Mind over the Body—Dr. C. R. Hall on the Ophthalmic Ganglion—Dr. D. Kerr's Surgical Cases—Dr. R. W. Young on the Report of the Health of Towns' Comission—Dr. W. Pickells' Case of Beetles expelled from the Stomach—Full Report of the Evidence given before the Coroner in the Fatal Case of Military Flogging at Hounslow.

The Number also contains Reviews of Watt's Vital Statistics of Glasgow; Geddes's Clinical Illustrations of the Diseases of India; Sir James Clark on the Sanative Influence of Climate; Mr. Lee and Dr. Wetzlar on the Baths and Springs of Germany—The Cold-Water Cure.

The Number concludes with a Digest of the most recent and important Medical Intelligence, with Dr. A. D. Thomson's Observations on the best mode of preparing Bread.

A. C. Black, Edinburgh; Longman and Co. London.

TONTINE LIFE ASSURANCE COMPANY, 20, Pall Mall.

CAPITAL, £400,000.

TRUSTEES.

John Elijah Blunt, Esq.
John Conolly, M.D.
Saville Craven Henry Ogle, Esq. M.P.

BANKERS.

Messrs. Herries, Farquhar, and Co.
Messrs. Martins, Stones, and Martins.

This Company effects every species of Life Assurance, Annuity, and Endowment.

Four-fifths of the profits divided amongst the assured on the participating scale.

This Company grants Tontine Annuities in classes according to age, with benefit to survivorship, viz.—

		£.	s.	d.
Class 5, including	20 to 25 years of age,	3	11	5
Class 9, ...	40 to 45	3	18	0
Class 13, ...	60 and upwards	4	15	1

Example—A party investing £100 in Class 13 will, from the day of investment, receive an annuity of £4. 15s. 1d. per annum; and on the completion of the number in his Class, his annuity will increase as his companions die off, until it reaches the sum of £1,000 per annum, which he will enjoy during the remainder of his life.

Prospectuses may be had on application at the office.

FERDINAND GRUT,
Actuary and Secretary.

Medical Referees and Agents required in the Cities and Towns of England, Scotland, and Ireland.

A Premium will be given to Assurers and Shareholders in this Company.

Just published, post 8vo. price 6s. cloth,

THE BRAIN and its PHYSIOLOGY;

a Critical Disquisition on the Methods of determining the Relations subsisting between the Structure and Functions of the Encephalon. By DANIEL NOBLE, Member of the Royal College of Surgeons of England.

London: John Churchill, Princes Street, Soho.

THE PHARMACEUTICAL JOURNAL for October 1.

Edited by JACOB BELL.

CONTENTS:—The Spirit License and Duties' Act—Apology to Dr. Gardner—Vindication of Dr. Gardner—Counter-Statement—The Royal College of Chemistry—Amorphous Quinine—Quiniodine—Thunder-Rods—Oxide of Silver—Process for preparing Cannabine—Water-Bath Funnel (with Cut)—Poisoning with the Berries of Belladonna (with Cut)—Pigments (continued), Yellow—Antidote for Prussic Acid—Diseased Potatoes—The Preparation of Mannite—Change in Tinct. Iodine from keeping—Chloride of Mercury and Quina—Adulteration of Iodine—False Batavian Musk-Pods—Test for Strychnia—Gun Cotton—Chemical Railway Whistle, &c. &c. Price 1s.

Published by John Churchill, Princes Street, Leicester Square; Maclachlan and Stewart, Edinburgh; and Fannin and Co. Dublin.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES,

offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Seltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton; by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the public against spurious articles.

Just published, 8vo. price 10s. 6d. cloth,

THE NATURE and TREATMENT of GOUT.

By W. H. ROBERTSON, M.D.

"We have read this treatise with much interest, and we are sure that every one that opens the volume will allow that it is not only replete with information brought down to the latest period, and of a very practical character, but that it is conveyed in an agreeable and interesting manner. It is difficult to specify any one part of the volume as more deserving attention than another, for all are ably done."

EDIN. MED. AND SURG. JOURN.

London: John Churchill, Princes Street, Soho.

NOTICE TO THE PROFESSION.

LONDON MEDICAL DIRECTORY.

—The Circulars are now in course of delivery. Any gentleman practising in London, or within five miles thereof, who may not have received one by Saturday, the 10th inst. is requested to apply to the Editors, care of Mr. Churchill, Princes Street, Soho.

PROVINCIAL MEDICAL DIRECTORY.—The Circulars will be posted between the 10th and 20th days of this month.

This day, 8vo. price 2s. 6d. with Drawings in Colours, Part 3 of the

MICROSCOPIC ANATOMY of the HUMAN BODY in HEALTH and DISEASE.

By ARTHUR H. HASSALL, M.R.C.S. Eng. F.L.S. &c. Author of a "History of British Freshwater Algæ." To be completed in about 12 Monthly Parts.

"We have derived much pleasure and satisfaction from the perusal of the first part of Mr. Hassall's work. His style is clear and concise, his descriptions are perfectly intelligible, and the plates are well executed."

MEDICAL GAZETTE, Aug. 28.

London: S. Highley, 32, Fleet Street.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.

Friday, Oct. 2, 1846.

Nº 984.—Vol. XXXVIII.
[New Series, No. 76.]

Price {Unstamped, 8d.
Stamped.... 9d.

LONDON MEDICAL GAZETTE,

OR

Journal of Practical Medicine.

Published every Friday Morning.}

October 9, 1846.

{Also in Monthly Parts.

LECTURES.

Page
Introductory Discourse on the Mode of Investigating the Sciences belonging to the Medical Profession, delivered in the Theatre of St. George's Hospital, Oct. 1, 1846, by Sir B. C. Brodie, Bart. &c. &c. 603
An Introductory Lecture, delivered Oct. 1, 1846, at the Opening of the York Medical School, by Thomas Laycock, M.D. Licentiate of the Royal College of Physicians, London; Physician to the York Dispensary; and Lecturer on the Theory and Practice of Medicine 613
Wide Range of Medical Studies 613
Opportunities for the Study of Clinical and Forensic Medicine 615
Outlines of the Course on the Theory and Practice of Medicine 616

ORIGINAL COMMUNICATIONS.

On the Scotch Epidemic Fever of 1843-4. By Richard Wardell, M.D. Ed. late President of the Royal Physical and Hunterian Medical Societies, Edinburgh, &c. &c. No. VIII. 617
Jaundiced or "Yellow Cases," often associated with a dark, coffee-grounds looking (and, in some instances), black vomit 617
Case of extensive Laceration of the Organs of Generation. By J. Snell, Esq. Hafod, South Wales 622
Case of Sloughing of the Penis. By James Kirk, Esq. M.C. 623

LEADING ARTICLES.

Regulations of the Apothecaries' Society for 1846-47 624

REVIEWS.

Clinical Collections and Observations in Surgery, made during an attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. Ormerod, F.R.C.S. late House-Surgeon at St. Bartholomew's Hospital 627
A System of Surgery. By J. M. Chelius. Translated from the German, and accompanied with additional Notes and Observations, by John F. South. Nos. 10, 11, and 12. 630

PROCEEDINGS OF SOCIETIES.

Page
Medical Society of London.—Discussion on Homœopathy — Honesty of Homœopathists 640

MEDICAL TRIALS AND INQUESTS.

Charge preferred by a Physician against a Surgeon for Malapraxis in a Case of Strangulated Hernia 634
Rape on an Idiot 639

SELECTIONS FROM JOURNALS, ETC.

On the Propagation of Scarlet Fever. By Dr. J. R. Mitchell, of Philadelphia 618
Microscopic Examination of the Contents of Exanthematous Vesicles and Pustules .. 642
Empyema communicating with the Abdomen. By Dr. Fisher 642
The Therapeutics of Hydatid Formations .. 643
Case of Hermaphroditism. By John Grigor, Esq. 644

MEDICAL INTELLIGENCE.

Phosphorescence of the Human Body 617
Treatment of Umbilical Hernia............ 617
Economical Employment of Urine in Agriculture.............................. 623
Caoutchouc Gloves for Dissecting Purposes. 634
Medical Assistants 641
Adulteration of Atropine 641
Conformation of the Body in Apoplectic Persons 641
The Blaps Mortisaga (Churchyard Beetle)—Tenacity of Insects.................... 641
Obituary................................ 642

WEEKLY TABLES, ETC.

Royal College of Surgeons.—List of Gentlemen admitted Members 645
Apothecaries' Hall.—Gentlemen who have obtained Certificates 645
Births and Deaths in the Metropolis........ 645
Meteorological Summary.................. 645
Books received for Review 645
Notices to Correspondents 646

[For Advertisements, see next page.

NEW EDITION OF

LIEBIG'S ANIMAL CHEMISTRY.

On the 15th of October will be published, in 8vo. Part I. (the first half of the work) of the Third Edition, almost re-written.

LONDON: TAYLOR AND WALTON, 28, UPPER GOWER STREET.

WESTMINSTER HOSPITAL SCHOOL of MEDICINE.—The WINTER SESSION commenced on Saturday, October 3, with an Introductory Lecture by Mr. Erichsen.

Anatomy and Physiology—Mr. Erichsen, and Mr. J. W. C. Pennell.
Practical Anatomy and Demonstrations—Mr. J. W. C. Pennell, and Mr. Barnard Holt.
Surgery—Mr. B. Phillips, Assistant-Surgeon to the Hospital.
Medicine—Dr. Hamilton Roe, and Dr. Kingston, Physicians to the Hospital.
Materia Medica—Dr. Basham, Physician to the Hospital.
Chemistry—Mr. Harman Lewis, A.M.
Midwifery—Dr. Andrews, and Dr. F. Bird.
Dental Surgery—Mr. Clendon.
Physics—Mr. C. Brooke.
Botany—Dr. Basham.
Forensic Medicine—Dr. F. Bird.

General Fee to all the Lectures—Forty Guineas.

Further particulars may be obtained at the Hospital.

N.B.—Facilities are afforded for those who may wish to dissect in the Evening.

August 18, 1846.

TONTINE LIFE ASSURANCE COMPANY, 20, Pall Mall.

CAPITAL, £400,000.

TRUSTEES.
John Elijah Blunt, Esq.
John Conolly, M.D.
Saville Craven Henry Ogle, Esq. M.P.

BANKERS.
Messrs. Herries, Farquhar, and Co.
Messrs. Martins, Stones, and Martins.

This Company effects every species of Life Assurance, Annuity, and Endowment.

Four-fifths of the profits divided amongst the assured on the participating scale.

This Company grants Tontine Annuities in classes according to age, with benefit to survivorship, viz.—

		£.	s.	d.
Class 5,	including 20 to 25 years of age,	3	11	5
Class 9,	.... 40 to 45	3	18	0
Class 13,	.... 60 and upwards	4	15	1

Example—A party investing £100 in Class 13 will, from the day of investment, receive an annuity of £4. 15s. 1d. per annum; and on the completion of the number in his Class, his annuity will increase as his companions die off, until it reaches the sum of £1,000 per annum, which he will enjoy during the remainder of his life.

Prospectuses may be had on application at the office.

FERDINAND GRUT,
Actuary and Secretary.

Medical Referees and Agents required in the Cities and Towns of England, Scotland, and Ireland.

A Premium will be given to Assurers and *Shareholders in this Company.*

NEW WORK ON CLINICAL SURGERY.

Just published, in 8vo. 10s. 6d. cloth,

CLINICAL COLLECTIONS and OBSERVATIONS in SURGERY, made during an Attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. ORMEROD, Fellow of the Royal College of Surgeons of England; late House-Surgeon at St. Bartholomew's Hospital.

Longman, Brown, Green, and Longmans.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."
PHARM. JOURNAL, May 1846.

Prepared by Dinneford and Earland, 172, Bond Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

SCHOOL of ANATOMY and MEDICINE, adjoining St. George's Hospital.—The Introductory Address was delivered by Dr. Theophilus Thompson, F.R.S. on Thursday, October 1, 1846, at half-past 2 o'clock.

Anatomy, Physiology, and Surgical Anatomy—Mr. Lane, Dr. W. V. Pettigrew, and Mr. G. E. Blenkins.
Descriptive and Practical Anatomy—Dr. W. V. Pettigrew, and Mr. G. E. Blenkins.
Prosectors and Anatomical Tutors—Mr. F. Hatchard, and Mr. Croft.
Chemistry—Mr. Rodgers.
Materia Medica and Therapeutics—Dr. Lankester, F.R.S. F.L.S.
Midwifery and Diseases of Women and Children—Mr. Bloxam.
The Principles and Practice of Medicine—Dr. Goolden, and Dr. Theophilus Thompson.
The Principles and Practice of Surgery—Mr. Lane and Mr. Pilcher.

SUMMER SESSION.

Medical Jurisprudence—Mr. Ancell, and Mr. Warder.
Botany—Dr. Lankester, F.R.S.
Practical Chemistry—Mr. Rodgers.

Perpetual Fee—Forty Guineas, qualifying for all Medical Boards of Examination.

Further particulars respecting the School may be obtained on application at the Theatre, 1, Grosvenor Place; or to the Honorary Secretary, Dr. V. W. Pettigrew, 30, Chester Street, and at the residences of the different Lecturers.

London Medical Gazette.

Lectures.

INTRODUCTORY DISCOURSE

ON THE

MODE OF INVESTIGATING THE SCIENCES BELONGING TO THE MEDICAL PROFESSION.

Delivered in the Theatre of St. George's Hospital, Oct. 1, 1846.

By Sir Benjamin C. Brodie, Bart. &c. &c. &c.

There is no situation in life which has not its disadvantages to counterbalance whatever advantages it offers to those by whom it is occupied; and the question is, not whether it be without one or the other, but which of these predominates. For those whose lot in life is already cast, it is well that they should look chiefly on the bright side of the picture. In doing so they will be the most happy in themselves, and most useful to others; and they will suffer little from efforts and exertions, which would be otherwise painful and oppressive. But with you, who are beginning your career, the case is different. Your lot is not irrevocably determined. You have your choice to go forward, or to retreat, before yourselves and your families are put to the expense of your professional education. It is not unreasonable for you to inquire into the bad as well as the good: nor shall I, as your friend and adviser, be going out of my way, if, in this introductory address, while I point out the inducements which you have to proceed further, I also take notice of the principal objections which may be made to the profession into which you are about to enter, and the difficulties which may obstruct your progress in it.

Do not, then, flatter yourselves with the belief that, in engaging in any department of the medical profession, your way will lie all smooth before you. If you are unsuccessful you will be disappointed, and will regret that you had not embarked in some other pursuit. But, to be successful you must make up your minds to a life of labour, of incessant occupation of mind and body. You will never be able to say, "the next day, or even the next few hours, will be my own;" for the claims on your attention may occur at any time, and often will occur where it seems that you have the least right to expect them. You never can be off your guard. Then, to the anxiety which you will experience in common with every one who looks to his own exertions for his advancement in the world, you will have superadded another, and a higher kind of anxiety, such as every one must, or ought to feel, who is responsible for the health and lives of others, involving, as often happens, the comfort, the happiness, and the worldly prosperity of families. Unlike some other pursuits, the medical profession offers you no political honours or distinctions. It is one essentially belonging to private life; and you will neither share the acclamation of the *profanum vulgus* with the demagogue, nor be elevated to the peerage as the reward of real services to the state, or as the price of your faithful adhesion to a minister. In the practice of your art you will necessarily be called on to witness much that is disagreeable and painful to behold; you will be present at scenes of woe, of mental distress, of bodily suffering: you will be brought into contact with human misery in various, and in some of its most aggravated, forms.

It is not improbable that some of you may, at this moment, be saying within yourselves, "Can there be any thing to compensate for so great a sacrifice, as all this seems to imply, of leisure, of comfort, and of feeling? Will it not be better at once to turn aside into some other walk of life?" Any such conclusion, however, would be, without some further consideration, premature. If you inquire of those who are engaged in other professions, you will not be long in discovering that there is no one of them which has not its difficulties and disadvantages as well as yours; and moreover, you will eventually learn that some of what the ignorant and thoughtless call disadvantages, are in reality no disadvantages at all. There is no pursuit, that is worthy of a man of intellect, the objects of which are attainable without labour, and thought, and self-denial. But is this a hardship? It is far otherwise. A very few years of experience in the world will satisfy you that no one is less happy than the individual who, having nothing to study or attend to but the gratification of his own desires, says in the morning, "What shall I do to-day?" To be cheerful and happy, you must be employed. Each day must bring its own occupation with it, something that you feel it to be, or make it, your duty to attend to; and not only that, it must be something that is useful at the time, or calculated to be useful ultimately. Whatever they may pretend, no one, whose intellect is not of the lowest order, can really be satisfied with himself, if he be not in some way or another usefully employed. Mankind may be, and are, vain or proud, as the case may be, of their personal appearance, their wealth, their rank, their genealogies; and I will not say that the desire of these distinctions, whatever may be their value in the eyes of a philosopher, has not been an useful instrument in the civilising of nations. But such sentiments begin and

984.—xxxviii. *Oct. 9, 1846.*

end with the individual; and even when gratified to the full extent, as the means of happiness bear no comparison with that self respect which you will all have a right to feel if you contribute in your several stations, and to the best of your abilities, to the improvement of the condition of your fellow creatures. In this respect your profession possesses an advantage over the majority of others, for it has no other object than that of relieving human misery; and to those among you who are fortunately able by your observations and researches to advance the sciences belonging to the healing art, it will be no small consolation, as you approach the end of your career, to know that the results of your labours will not perish with yourselves, but will remain to be a benefit to future generations.

The usefulness of your profession is the best guarantee of its independence. If it be properly pursued, there is no situation in life superior in this respect to that which you will occupy. It is true that you will depend upon the good opinion of the public. This, however, is not only no hardship, but is the very best thing for your own moral character; and you may be assured that, while you perform your duty towards them, they will maintain you above the influence of individual caprice. If political rank form no part of the reward you may expect to reap, it is simply because you have chosen the path, not of politics but of science. Among those who have preceded you in it, and in our own particular department, we find some of the brightest ornaments of British history; and I will not do you the injustice of supposing that there is any one among you, who would not prefer the reputation of Harvey or the Hunters to that of nineteen-twentieths of the courtiers and politicians of the periods in which they lived. Always bear in mind, that your profession is founded on the most important science to which the mind of man can be directed, the science whose office it is to analyse not only the physical, but also the moral, structure of man himself; and that this includes within its domain some portion of almost every other department of human knowledge. Next to its usefulness, it is this close connection of our profession with philosophy which constitutes its chief dignity and excellence; elevating it from the rank of a trade into that of a noble and liberal pursuit. It is only by the scientific cultivation of it that we can expect to arrive at any considerable improvement of our art; and it is by such means only that studies, which would be otherwise disagreeable and painful, can be rendered agreeable and interesting.

From the preceding observations you will have learned that I wish you to understand, that the value of the profession into which you propose to enter, will depend mainly on yourselves. If you are prepared to make the necessary sacrifices, and devote yourselves seriously and thoroughly to the pursuit, you will be sufficiently rewarded for your exertions; but if you embark in it on any other terms, your lives will be but a series of regrets and mortifications.

On former occasions,* and in the theatre in which we are now assembled, I have called the attention of those who were then present to various subjects connected with the study and practice of the medical profession; explaining generally the objects to be kept in view, and referring to various points which I believed to be important in relation to the general conduct, and moral discipline, of medical students and practitioners. Although I now address a different audience, I shall not repeat observations which I then made; they are gone forth to the world in various forms, and those who think it worth their while to become acquainted with them cannot fail to have the opportunity of being so. In the remaining part of the present discourse I propose to offer another subject to your consideration, endeavouring to explain, in a more precise manner than formerly, the nature of the investigations on which you are about to enter, the kind of knowledge which you may expect to acquire, and the various sources of error by which, if you proceed without due circumspection, you may be misled, as others have been misled before you.

The sciences belonging to the medical profession relate to matters of fact, to things as they exist in nature, and the changes which they undergo, for which no reason can be given except that so it is, and that such is the will of the Creator. The foundation of them is the same as that of the other physical scienees. The first requisite in such investigations is therefore the habit of minute and accurate observation. The mathematician sitting in his closet, without any reference to what goes on in the world around him, may imagine curves which perhaps never existed in reality; and may reason on them, and determine their properties with the most perfect accuracy. In like manner the moralist may imagine situations, in which a human being has never yet been placed, and determine very correctly what, as a moral agent, he ought or ought not to do on such occasions. But these inquiries are wholly different from ours; and it cannot be too strongly impressed on your minds, that any process of reasoning which lifts you above real objects, and the relations which they bear to each other, is good for nothing. This is so plain a matter, that it might seem unnecessary for me to make any kind of allusion to it; yet there are many persons who, though they would at once assent to the proposition when stated in the abstract, seem in practice to lose sight of it altogether. "I am accustomed to reason, and I cannot help reasoning, about my complaints." This was said to me by an eminent mathematician, whose knowledge of his case consisted of three or four symptoms, as to the exact cause of which I was myself in doubt. I need not tell you what was the value of his conclusions, Among those who do not belong to the medical profession, this kind of error is of constant occurrence. But it is not peculiar to them; it pervades medical literature to a very great extent. A large proportion of books which have been published (and I do not allude merely to those of the present day), pretending to illustrate diseases and their treatment, were written by those who had nothing beyond the most limited experience and knowledge of the subject of which they proposed to treat. They begin with a few acknowledged facts, assume or imagine others, heap on them a quantity of words having the outward form of reasoning and argument, and thus arrive at conclusions for which a more extended experience would shew that there is no foundation.

---

* See the volumes of the MEDICAL GAZETTE for 1838 and 1843.

Anatomy is a science of simple observation. You use your sight and touch for the purpose of examining the object which is before you. If in minute anatomical researches you have recourse to the microscope, still it is the same thing; this is but another mode of using the sight. In physiology you may place the object under new circumstances, you may make it the subject of experiment; the sphere of experiment, however. being much more limited than in chemistry and some other branches of natural philosophy. In the study of disease, you rely, as in that of anatomy, on observation only; but you have two sources of knowledge, the living body and the dead. In the study of remedies, your observation is assisted by experiment to a very great extent, and in many instances is founded on experiment altogether.

Now whether the thing to be observed be what is presented to you in the ordinary course of events, or whether it be the result of experiment, you cannot be too minute and accurate in your observations; and from the beginning you should train your minds accordingly. The power of observing is undoubtedly different in different individuals; but those who observe easily, are liable to have the faculty impaired by neglect, and in others it may be improved by cultivation. Never forget that a medical practitioner who is not a correct observer is good for nothing. *Examine whatever* comes before you as students in whatever way it admits of being examined, and as minutely as possible. You do not know at first what is important and what is not, and therefore you should endeavour to overlook nothing, until you are taught this by experience. Long habit, combined with an extensive knowledge of your subject, alone can give you the power of observing accurately and rapidly at the same time. If you attempt in the beginning to imitate persons of greater experience in this respect, your observations will be, not rapid, but hasty, and not of the smallest value.

In observing objects you will necessarily be led to compare them with each other, and perceive in what respects they agree or differ; and this leads, as a matter of course, to some kind of arrangement and classification. The intellectual process in this case is different from the inductive method, by which you deduce those general rules, which we call the laws of nature, from the observation of phenomena. In the latter case you ascend from particular instances to the general rule; but in the former you begin with the general, and descend to the particular. To one who has nothing to do with sheep, one sheep is just like another; but a dealer in sheep distinguishes between the different breeds, and a shepherd distinguishes each individual of his flock. In the dissection of the dead body you discover two membranous tubes or vessels, containing blood. You call them both blood-vessels. But, on further examination, you find that one of them is composed of very thin membranes, and that it collapses on being cut across; while the coats of the other are considerably thicker, containing a good deal of fibrous structure, and the vessel when cut across, instead of collapsing, remains patulous; and thus, even if you were told nothing about them, and without having the smallest knowledge of their functions, you could distinguish arteries and veins from each other. In like manner, when you first feel the pulse at the wrist, you find one pulse to be like another. It is something beating under your finger; a pulse, and that is all. By and by, you discover that the pulse varies in frequency. In one patient ill of a fever it beats 140 times; while in another, with a disease in the brain, it may beat no more than 40 times in a minute. All this is easy enough, for you can ascertain it by a watch. As your finger becomes more experienced, a close attention to the impression given to it enables you to distinguish a hard pulse from a soft one; a full pulse from one that is contracted; and at last you recognise still more minute differences, such as cannot be explained in words, though the recognition of them may lead to important results in practice. In like manner one ulcer at first is like another. By and by you detect differences of colour and of surface, and a different appearance of their margins, of which you took no cognizance before; and almost without being aware that you are doing so, you make some sort of classification of them in your own minds. It may not be a very good classification, and certainly it will not be that to which a more extended knowledge of disease will lead you ultimately; but, nevertheless, imperfect as it is, it is convenient, and answers an useful purpose at the time.

The principal thing required for accurate observation is a close attention to the thing before you; and this involves no small effort of mind, if you do not feel an interest in it. I may, however, take this opportunity of observing, that I do not measure the probability of a student's ultimate success by the amount of interest, or the facility of bestowing his attention, which he displays in the first instance; for there are many who are captivated by novelty, and cease to feel an interest in their pursuit as soon as the novelty of it is passed away. Let no one despair, because, in the beginning, he seems to feel less interest in his studies, and finds it more irksome to exercise the necessary effort of attention than some others. Let him strive to do his best, and not only will the power of attention come at last, but he will create for himself an interest in things that were uninteresting before. I know that it often happens that a young man is brought up to a particular profession, because it is supposed that he has an especial liking for it, or a *particular turn that way.* Now I do not say that this goes for nothing, and I have no doubt that one structure of mind may, on the whole, be better adapted for one pursuit, and another for another. But I also know that, in many instances, there is nothing beyond a mere love of novelty; and I have very much more confidence in those who enter a profession after due thought and reflection, with a strong determination that, having done so, they will not fail from want of attention, and that they will create for themselves a feeling of interest in it.

The importance of acquiring a habit of accurate observation cannot be too strongly impressed on your minds. The knowledge, however, which is thus obtained does not deserve the name of science, though there can be no real science, no true philosophy, without it. Whatever is the subject of observation leads to the inference of something beyond it: it informs you of another fact, or a whole series of facts. Comparing the phenomena which you have observed with each other, you perceive in what respects they are alike, and in what they differ, and you arrange them accordingly,—and thus it is that you arrive at these general rules, which, as I have before remarked, we call the laws of nature. This is the method of research to which the name of *inductive* has been given by logicians. There is nothing in it mysterious or difficult; and although you may not have analysed the process in your own minds, you do not require logicians to instruct you in it. Your own instinct is sufficient. "It is evident," says Mr. Dugald Stuart, "that the ultimate object which the philosopher aims at in his researches is precisely the same as that which every man of plain understanding, however uneducated, has in view when he remarks the events which fall under his observation, in order to obtain rules for the future regulation of his conduct*."

In the prosecution of your anatomical researches, you discover certain structures which must act as valves at the commencement of the two principal arteries of the body, in the heart, and in many of the veins. You observe that these valves all open in one direction, and from these premises, when you come to consider the functions of these parts, you have a right to consider that the current of the blood takes a particular course, and that it can flow in no other. Then, you perceive that the blood in some of the vessels of the living person is of a dark, and in others of a scarlet colour; and also, that when the dark-coloured blood drawn from a vein in the arm is exposed to the air it becomes scarlet, and this justifies the suspicion, that the change from the one colour to the other is somehow produced by the contact of the air in the living person, Still it is only a suspicion, for it may be that a similar change is produced in other ways. By and by, however, you ascertain that fresh air is being constantly drawn into, and then expelled from, the lungs; that the blood in the pulmonary artery is of a dark, and that in the pulmonary veins of a scarlet colour; and lastly, that the air which passes out of the lungs has undergone a change differing in its chemical composition from what it was when it entered that viscus,—and all these facts, viewed in combination with each other, convert what was before a well-founded suspicion into as absolute a certainty as can be attained in any investigation of the kind. Having advanced so far, you see a person naturally of a florid complexion, with his cheeks and lips of a dark purple hue, and from this simple fact you infer that the blood is not influenced by the air as under ordinary circumstances, and that this depends probably on some defect in the respiration. But you can arrive at no more particular conclusion, and further inquiries are necessary before you can determine whether the respiration be obstructed by an enlargement of the tonsils, or swelling of the mucous membrane of the glottis, or in any other way.

---

* Moral Philosophy, Vol. 2, Chap. 4, Sect. 1.

Let us take another example. A person who has not had the small-pox is in the same room with another who is labouring under that disease. After a certain lapse of time he is indisposed—he is hot, and complains of headache and lassitude, and his pulse is more frequent than it should be; in other words, he is feverish. Then an eruption of small-pox pustules appears over his whole person, and immediately the other symptoms are in a great degree relieved. Still some fever remains, which, perhaps, increases some time afterwards, but at last subsides as the eruption dies away. These various symptoms follow each other so immediately, that even if we were to witness only a single case of the kind, we should be justified in regarding them as probably depending on one and the same cause, and as constituting different stages of the same disease. But finding the same course of events in a second case, and a third, and so on, we entertain no doubt on the subject. A close observation of the symptoms and changes which take place enables us to give what is called a history of the disease, and our belief in the uniformity of the operations of nature (from whatever cause it may be derived), justifies our expectation that the history drawn from the past will apply to the future, and are a useful guide to those who are to come after us, as well as to ourselves.

But the connection between the visit to the sick man's chamber and the appearance of the small-pox afterwards, is not established by a single case, nor even by two or three cases. Many more such facts are necessary to prove that there was any thing more than a mere coincidence; for if the small-pox were to arise independently of contagion, such coincidences would undoubtedly occur, and, accordingly, it is worthy of notice, that although the multiplication of evidence has established the fact of the small-pox being propagated solely by contagion, for a long time after the disease first shewed itself, there was no suspicion of its contagious character.

All this is substantial knowledge, for it consists of the observation and generalization of phenomena, and of nothing more. But the inquiring mind of the pathologist would naturally wish to know more. What is the nature of the contagious principle? Is it disseminated through the atmosphere as a gas, or does it belong to the class of imponderable agents? Is it a modification of the principle of electricity or magnetism? Does it act through the medium of the skin, or of the lungs? On the blood, or on the brain, or on both? On these points we have no sufficient data to enable us to form an opinion. The only fact that we really know is, that the virus or poison is contained in the fluid of the pustules, for by means of this it may be communicated by inoculation. Other researches, to which I need merely allude at present, shew that all the secretions are furnished by the circulating blood, and we have a right to conclude that so it is with respect to the fluid of the variolous pustules; and, indeed, we cannot suppose it to have any other origin. This leads us to a further speculation. There is much fever in the beginning of the small-pox, which is relieved on the appearance of the eruptions. May not this be explained on the supposition, that there is a generation and accumulation of the virus in the blood, the abatement of the symptoms being the consequence of the expulsion of it in the form of pustules? The glanders in horses is a contagious disease, communicable by inoculation to the human subject. The late Professor Coleman informed me of the following experiment. He took a large quantity of blood from a sound horse, so as to occasion syncope, and then transfused into one of his larger veins the blood of a glandered horse. The result was, that the horse which had been sound became affected with the glanders. Viewing these various facts in connection with each other, we find a strong body of evidence in favour of the humoral pathology as applied to small-pox and other contagious diseases. Still it would be bad philosophy to admit it as amounting to more than a strong presumption; for all the phenomena admit of some other explanation, and in experimental physiology the disturbing influences are so great that we are scarcely ever justified in adopting a conclusion on the authority of a single experiment.

With a view to the further illustration of the subject before us (my object being to impress on your mind the necessity of caution in conducting these inquiries), I may advert to another point connected with the history of the small-pox. An individual who has recovered from that disease falls into the society of one who is covered with the small-pox pustules, but he is not affected with the disease in consequence. This may be accidental, for all persons are not equally liable to receive the infection. But it happens again and again, and persons without number, who have had the small-pox, are exposed to the influence of the contagion with the same negative result; so that we have a right to lay it down as a rule or a law of nature, that the small-pox will not affect the same individual a second time. By and by we make the same observation as to measles, and some other contagious diseases. But we can generalize no further. We presume that the small-pox and measles cause some change in the organization of the body which prevents it from being affected by the contagion a second time, but as to what that change is we are wholly ignorant, and it is probable that we shall ever remain so, it being of too minute and too refined a character for our senses to be able to detect it. We may suggest various explanations, but they would be purely hypothetical, such as can neither be proved nor disproved, and to indulge ourselves in discussions of this kind would be mere waste of time and intellect.

To the careful student of disease, that which now exists reveals much of that which existed formerly, and much of that which will exist in future. It also informs him of many things which exist at the present time, though beyond the sphere of his actual observation. A pain in the temple, and a *ptosis*, or dropping of the upper eyelid, show that there is some kind of disease within the cranium in the situation of the nerve of the third pair. If these be the only symptoms, we are compelled to confess our ignorance as to the exact nature of the disease; but if, after an injury of the head, such symptoms exist in combination with fever, delirium, and occasional rigors, we are justified in believing that suppuration has taken place in the neighbourhood of the above-mentioned nerve, this being a reasonable hypothesis, the truth of which has received ample confirmation from the examination after death of other similar cases.

A swollen state of the lower limb, with a varicose condition of the veins of the leg, shows that, at some former period, there has been inflammation, causing obstruction of the femoral, or at any rate of the saphena vein; and in the scirrhous enlargement of the mammary gland, with a thickened and brawny condition of the skin over it, we read the melancholy history of the termination of the patient's life at some future period by the effusion of serum into the cavity of the chest.

This natural vaticination (to use the expression of Bishop Berkley), in this, as in other departments of knowledge, is founded solely on experience; and whoever ventures beyond the limits of his experience will soon prove himself a false prophet. If correct in his opinions, he can be so only by accident, and though what is called a *lucky hit* may sometimes gain him great credit where he deserves none, he will be absurd and ridiculous in the end. And let it be always borne in mind, that, even with all our caution in the prosecution of our sciences, there are difficulties in the way beyond what are met with in that of almost any other, arising from their greater complication. The astronomer, directing his attention to simple laws by which great masses of matter are influenced, is enabled to make the phenomena which he observes the subject of mathematical calculation. The chemist has to deal with a greater variety of phenomena, and with the chemical laws, in addition to the mechanical laws, of matter; and in the facts which are the subject of inquiry with the physiologist and pathologist, we recognize the operation not only of mechanical and chemical laws, but also of those peculiar laws which are connected with the principle of life, whatever that may be. We have no right to believe that the time will ever arrive when we shall be able to apply mathematical reasoning to the phenomena of the living body, either in health or in disease, except in a few instances, and to a very limited extent. With us, the subjects of inquiry are probabilities, and not absolute certainties. It is true that there are probabilities so great that we are justified in acting on them as certainties; but below them are all grades of minor probabilities, down to that which is so small that it should be wholly disregarded: and in our pursuits, as in the common affairs of life, it is the power of calculating probabilities at the same time readily and accurately that constitutes what is called a *man of sound judgment*.

Under the name of *therapeutics* we include whatever belongs to the remedial treatment of diseases, including surgical operations, medicines administered internally, local applications, change of air and climate, and other things which it is needless to enumerate. In this part of our investigations we possess this advantage, that we may, to a very great extent, conduct it experimentally. There is, however, a source of error which, perhaps, more than counterbalances this advantage; namely, the difficulty of distinguishing between the effects of the remedies which we have recourse to for the cure of a disease, and the course which the disease would naturally take without our interference; and this difficulty can be met only by a multiplication of experiments and observations. The study of therapeutics cannot be separated from that of disease, and there are very few observations which I offered relating to the latter subject which are not also applicable to the former. In a few instances we may be led to the invention of a new remedy by the application of principles already known. Mr. Hunter was aware that a popliteal aneurism gradually became distended, until it burst, in consequence of the blood being probably impelled into it by the action of the heart. He also knew that, by the application of a ligature to an artery, the vessel becomes obliterated at the part to which the ligature is applied; and he perceived in the smaller arterial branches such communications or anastomoses as must be sufficient to nourish the lower part of the limb, although the passage of the blood through the main arterial trunk was interrupted; and, having all this previous knowledge, he was led to the performance of the operation for aneurism, which is now practised with so much success in every part of the civilized world. In other, and indeed in the great majority of instances, the discovery of a remedy, and the application of it to a particular disease, is altogether accidental; but the remedy having been once discovered, we are often enabled to extend the use of it from one disease to another. For example: no one could have pronounced beforehand that the bark of the cinchona would afford a cure for intermittent fever; but this having been once ascertained, the exhibition of it in cases of intermittent neuralgia, and some other intermittent diseases, became a reasonable, and it has proved to be a successful, experiment.

I conclude that you will find all this to be sufficiently plain, and that you cannot fail to perceive that the rules to be observed in the acquisition of medical knowledge are in no wise different from those by which you are directed in other scientific investigations, and even in the common affairs of life. How, then, does it happen, that among those who are engaged in these inquiries there should be so much difference of opinion, and that on many points there should be such various doctrines, having their respective supporters and advocates? I have already adverted to the difficulty arising from the circumstance of the laws which regulate the ordinary phenomena of matter being complicated with another set of laws peculiar to beings that are endowed with life. Another source of difficulty is, that a large proportion of the changes which are constantly going on in the interior of the living body can never be subjected to the actual observation of the senses. There is still another impediment to the advancement of these sciences, namely, that, owing to their greater extent and complication, they include a greater number and variety of phenomena than any other, so that it is scarcely possible that the whole of them should be within the grasp of even the most comprehensive mind. Nevertheless, and in spite of these impediments, by a proper mode of investigation, we may obtain a large store of interesting and useful knowledge; and we may learn also, what is not less important, the point at which our knowledge terminates, and beyond which it is needless for us to strive to penetrate into Nature's mysteries. We must not, however, satisfy our consciences with the belief that these things will explain the whole of the differences of opinion and doctrine which exist among us. Undoubtedly, much more is to be attributed to haste and carelessness, and the perversion of our judgment by various prejudices, than to any thing besides. It would be vain for any one among us to expect that, by any effort, he should become wholly divested of these qualities which interfere with and clog the operations of the intellect; but it is our duty, and, I may add, it is our real interest, to do what we can towards it: and thus, having considered what is the mode of inquiry proper to be pursued, we are led to consider also what are the mistakes into which we may fall if we are not careful to avoid them.

You will not have been long engaged in your professional studies before you have discovered how great is the danger of being misled by careless and hasty observation. I have already remarked, that the power of observation may always be improved by cultivation. But it seems as if, in some instances, the attempt at improvement is never made, and that one who is a bad observer in the beginning remains a bad observer through his whole life. I have in my recollection the circumstance of a member of our craft, who, for many years, had had much more than common opportunities of surgical experience, but who, nevertheless, on examining what seemed to others to be an adipose tumor, gave it as his opinion that it was chiefly wind! This, indeed, may be regarded as an extreme case, and a mistake so absurd as this can be scarcely called mischievous. The really mischievous mistakes are those which are less easily detected, and with which, unfortunately, both medical and surgical literature abounds. For example: a surgeon of eminence in a provincial city published an account of a case of ununited fracture of the femur, in which he stated that, having made an incision on the part, he sawed off the ends of the bones, and thus, having converted the case into one of compound fracture, and treated it accordingly, obtained the necessary union, so that the patient recovered the use of his limb. Now I have been informed, on what I regard as the very best authority, that, in this instance, the surgeon mistook the effects of the thickening and consolidation of the soft parts round the fractured bones consequent on the operation, for the union of the bones themselves, and that when, after some time, the effused lymph had become absorbed, it was found that the bones were still ununited; and I am further informed, that the patient having died afterwards, an examination of the body was made by another practitioner, who had been a pupil of the operator, which confirmed the fact of the entire absence of bony union. That such a mistake should have been made is, to me at least, not very remarkable, as I was very nearly making the same myself in one instance, in which I attempted to cure an ununited fracture of the thigh by the introduction of a seton. What we have a right to complain of is, that the surgeon published the history of the case prematurely, and more especially that he shall have allowed it to remain in the records of the Royal Medical and Chirurgical Society as an example of an operation which had proved to be successful, when he knew that it was otherwise.

It would be well if this had been a solitary instance. A large proportion of the observations published by medical writers are not more accurate than that which I have just mentioned, the difference being that, in matters connected with internal disease and the effect of medicines, the mistakes are less glaring, more easily made, and less easily detected, even by those who make them, than in surgical operations. Many of the wonders said to be wrought by new medicines belong to this category. It is not that those by whom they are recorded in general mean to publish untruths, or wish to deceive others, but they deceive themselves; and it is easy for them to do so. The love of novelty, an unreasonable anxiety to obtain an immediate reputation, vanity, and even the love of knowledge itself in an over-sanguine mind, may mislead the judgment. The process of self-deception on these, as on other occasions, is very simple. One set of facts is presented to the mind in such vivid colours as to exclude the rest; and although this undoubtedly proves an imperfection in the intellect, in many instances it proves nothing else. It is an imperfection to which all persons, whatever may be their pursuits, in a greater or less degree are liable; and the question is not so much who is without it, as who has been most successful in his endeavours to correct it. Not to make such endeavours is to allow the imperfection to become aggravated; and it is by this kind of self-indulgence (as it seems to me) that some persons at last bring themselves to believe just what they like, to believe in any subject that comes before them.

The greater facilities of publication which are afforded in modern times, joined to the increased competition in all professions and pursuits, has very much tended to increase the number of crude and undigested facts which are put forth to the public. The rule of "*nonum prematur in annum*," which is still more applicable to science than it is to poetry, is almost wholly neglected. Among a good deal of what is valuable there is very much of a very opposite quality; and one of the greatest difficulties which you will have to contend with is, to distinguish the one from the other. Internal evidence will help you a good deal, but your own experience will help you more; and, as your experience increases, so will the distinction be more easy. In the meantime, a judicious scepticism will be your surest safeguard against the contrary errors of too easily believing and too hastily rejecting the statements of your cotemporaries.

Mistaken observations are a principal, but not the only, cause of wrong conclusions. The deduction of them from a too limited number of facts is not a less frequent source of the same error, and, between the one and the other, it must be owned that no small proportion of the general principles enunciated by medical and surgical writers rest on no substantial basis. I do not here so much refer to those larger generalizations which are intended to include and explain the great mass of the phenomena of disease, constituting what are called systems of medicine, (and on which the best commentary is, that from Brown to Darwin, from Darwin to Broussais, they have come and departed like shadows), as I do to those minor generalizations, which, if properly conducted, are of the greatest value, and without which neither medicine nor surgery would have any claim to be placed in the ranks of science. Examples of this imperfection are to be found chiefly among the speculations of those who have neglected the means of obtaining personal experience, who think without the proper materials of thinking; but they are not confined to them, and even the most distinguished masters of our art, and those to whom we are the most deeply indebted, have not been altogether exempt from it. Dr. Jenner learned from persons employed in the dairies of Gloucestershire that those who had been accidentally inoculated with the vaccine virus were observed to be not afterwards liable to be affected by the small-pox. He made the experiment of communicating the disease artificially, and found the result to be such as he had been thus led to anticipate, and he gave this information to the world. Vaccine inoculation was soon very generally adopted, and, at first, without any instance of its failure. After some time, however, reports prevailed of persons who had the small-pox after previous vaccination. These were exaggerated, chiefly by some physicians and surgeons of doubtful reputation, and, certainly, of an inferior order of mind, who not only denied the efficacy of vaccine inoculation as a preventative of the small-pox, but published most absurd and unfounded histories of the mischief that it occasioned to the constitution. On the other hand, Dr. Jenner and the other ardent supporters of the new system of inoculation refused to believe that there could be any failure, and, one after another, cases that were supposed to be cases of small-pox after vaccination were declared to be nothing more than cases of *varicella*, or chicken-pox. Time and more deliberate inquiry, now that these two classes of enthusiasts have left the stage, has dislosed the real truth. The cow-pock is a reventive of the small-pox only to a limited extent. A large proportion of those who have had the former are nevertheless iable to be affected by the latter disease; but the small-pox which occurs under these ircumstances is so slight and so modified, hat it is a very rare circumstance for it to be attended with any severe or dangerous ymptoms. This is proved, not by the experience of a few individuals, but by statisical returns derived from the experience of he whole country; so that there can be no doubt that the world has been the greatest gainer from Jenner's discovery, and that, in pite of a somewhat hasty generalization in he first instance, he is rightly placed among he principal benefactors of the human race.

The late Mr. Abernethy published an ssay on the treatment of what is commonly alled *lumbar* abscess. In a case of this kind, he punctured the abscess, making a valvular opening, allowed the matter to esape, and then caused the puncture to heal by the first intention. When the contents of the abscess were again collected, but without allowing it to become so distended as in he first instance, he made another puncture, llowing it to heal as formerly. This process being repeated, each time with a smaller collection of matter, at last the cavity was, or was supposed to be, altogether obliterated. Other cases having occurred in which the application of the same process was apparently productive of the same good result, Mr. Abernethy came to the conclusion that he had discovered a simple method of curing what has generally been regarded as a very formidable disease. This conclusion, however, has not been confirmed by the xperience of other surgeons, and the researches of pathology have shewn why *à priori* we might not expect this mode of reatment to be generally successful. It is now well known that what is called a lumbar abscess is not an original disease, but merely he effect of caries of the lumbar vertebræ. The exceptions to the rule are so few, that hey need scarcely be taken into the account. Nothing done to such an abscess can cure he original disease in the vertebræ; and, wherever dead or carious bone exists, suppuration will proceed until the dead bon eis hrown off by exfoliation, or the carious bone is covered with healthy granulations. Whether, in the cases recorded by Mr. Abernethy, t so happened that there was really abscess n the soft parts unconnected with vertebral disease, or whether (which is much more probable) he did not keep the patients in view for a sufficient length of time afterwards o enable him to determine whether there was or was not a permanent cure, it is difficult to say. However that may have been, I believe that, at the present *time, no doubt* exists in the mind of any experienced surgeon that the principle which he laid down was the result of a too hasty generalisation, and that it ought not to influence our conduct in the treatment of the same disease.

It is observed by Archbishop Whately* that "the degree of evidence for any proposition we originally assume as a premiss is not to be learned from logic, nor from any one distinct science, but is the province of whatever science furnishes the subject-matter of your argument. None but a politician can judge rightly of the degree of evidence in politics; a naturalist in natural history, &c. &c." If this be true with respect to so simple a science as natural history, it cannot fail to be so with respect to the more complicated sciences belonging to the medical profession; and you will not, therefore, be surprised, that, if errors of generalisation are made by those who have made these sciences their peculiar study, still graver errors should be made by those who have not studied them at all. It would be absurd to suppose that any degree of sagacity, or any power of reasoning, will enable you to come to a right conclusion on any one subject, without a knowledge of all the facts in any way appertaining to it. M. Arago was deceived by the tricks of a girl, whose exploits in kicking down chairs and tables were attributed to her being overcharged with something like electricity. There might have been no defect in his reasoning on what he believed to be the facts of the case; nevertheless we cannot regard so great and influential a person as having been free from blame when he presumed to reason on a subject of which he had such insufficient knowledge. If M. Arago had been at the pains to obtain information from others as to the strange physical and moral condition which in certain individuals is connected with a disposition to hysterics, he would not have needed the assistance of so illustrious a body as the Royal Academy of Sciences to enable him to expose the artifices of the impostor.

In the public journals of the last month I have seen an advertisement relating to the establishment of a *mesmeric* hospital, in which patients are to be mesmerised, in order that they may be subjected to surgical operations without suffering pain, and the names of several noblemen and gentlemen (one of them a Cabinet minister!) are to be found in the list of the patrons of this new institution. It would be well to inquire, Have these individuals been themselves present at such a number of operations performed under what is called the mesmeric influence, as would furnish the data requisite for the adoption of a new principle in pathology? Have they had the assistance competent persons in the investigation of matters with which they are not themselves familiar? Are they aware that a large proportion of those who undergo surgical operations without being mesmerised scarcely complain of pain, whatever they may feel; that it is not very uncommon for them to converse at the time, as if they were indifferent spectators; and that it seems to be in the power of almost any one, under the influence of excitement, or a strong moral determination, to sustain bodily suffering, without any outward expression of what he suffers? Have they read the history of the sleeping man, recorded in the 24th volume of the "Transactions of the Royal Society," who, though tormented in various ways, by pins thrust into his flesh, by scarifications and cupping, and spirit of ammonia thrown into his nostrils, never could be roused from a state of profound sleep for four entire months; but, nevertheless, was not so insensible to other external impressions as to be prevented from regaling himself daily on bread and cheese and beer, and performing certain other functions, the necessary consequence of eating and drinking, in an orderly and decent manner? And, lastly, are they aware that other cases of the detection of similar impostures are recorded on the best authority?

---

* Whately's Elements of Logic, Book iv. Chap. i. Sect. 2.

There is no greater desideratum, either in medicine or surgery, than to have the means of allaying or preventing bodily pain, not only in cases of surgical operation, but in other cases also; but there is too good reason to apprehend that it has not been reserved for the revival of animal magnetism under a new name to accomplish that for which all physicians and surgeons have been looking in vain from the days of Hippocrates down to the present time.

In representing to you the necessity of proceeding with due caution in the deduction of general principles from individual facts, I should be sorry if I led you to believe that advances in science are to be made in no other way than by a strict and severe process of induction. On the contrary, an hypothesis, in which we assume that a principle may be true, although we cannot at the time positively prove it to be so, may often be employed with the greatest advantage; and it is, indeed, the principal method by which inventive genius, observing analogies which are unobserved by others, is led to discoveries. When Newton's mind was first directed to the law of gravitation, it was an hypothesis; but, when he had ascertained that the law universally prevailed, that it explained the phenomena of the heavenly bodies, and that these could not be explained otherwise, it became a true theory. Without the aid of hypothesis, Davy would never have ascertained the powers of the voltaic battery, or decomposed the alkalis, nor would there have been any other researches by experiment. But, in having recourse to it, we must bear in mind that the value of an hypothesis depends on its having a sufficient foundation in probability; that otherwise it must be, to say the least of it, a fallacious guide. On all occasions we must be careful that we do not take it for more than it is worth, and that we use it discreetly. A too great affection for a favourite hypothesis is apt to lead us to misinterpret facts, so that we believe them to be different from what they really are. It has been supposed that the brain is a sort of voltaic pile, and, indeed, there are facts which seem to justify the suspicion that something corresponding to the electric influence is generated in that organ; but, when we are told, in support of this opinion, that "the sensation communicated to the hand by the beating of the brain, or even of the larger arteries, bears a strong resemblance to a voltaic shock," we know that, instead of the hypothesis having been suggested by the fact, the supposed fact is but a fiction made to suit the hypothesis.

I have already exceeded the usual limits of a discourse of this description. In concluding it, however, there is one other point on which I would offer you some advice.

In the first instance, consider yourselves as occupied with the study of a single science; for so, indeed, it is. In every department of your profession, the phenomena to be observed belong to the same class, and are reducible to the same general laws. In the treatment of different diseases, you are to be guided by the same principles. Do not, however, suppose, that, by any effort, you will succeed in making yourselves perfect masters of the whole. If human life were longer,—if the human mind were more capacious,—if, without the necessity of sleep, it could continue in active operation during the entire twenty-four hours,—then, indeed, it might be otherwise; but, circumstanced as we are, we must be content to follow the example of those who are engaged in other scientific investigations, by setting a limit to our ambition, devoting ourselves especially to certain subjects of inquiry, and aspiring to no more than a general knowledge of others.

The division of the profession into different branches is neither arbitrary nor artificial; it has been produced in the natural course of events for the convenience of the profession itself, and of the public. The lines of division are not, indeed, exactly defined, nor are they the same everywhere. They differ in large cities and in small ones: in densely-peopled and thinly-peopled districts. They differ according to the tastes and habits of individual practitioners, and, still more, according to the special opportunities which they possess of experience in one way rather than in another. But everywhere, in a greater or less degree, such divisions do and must exist; and, whoever makes it his object to be more excellent than others in one department, must be satisfied with being either inferior, or not above mediocrity in others.

PROPAGATION OF SCARLET FEVER. BY DR. J. R. MITCHELL, OF PHILADELPHIA.

Some years ago the author was summoned to attend at the residence of an intimate friend, two of whose children, aged four and six respectively, had been simultaneously attacked with scarlatina. The most careful inquiry could detect no instance of exposure to a case of that disease. The children had been confined to the house by the inclemency of the weather, and no visitor had been received from any infected quarter: neither was there any case in the immediate neighbourhood. The cases were therefore, at first, attributed to general causes, atmospheric or epidemic; but as no other children, of which there were many in the immediate vicinity, were seized, the question of origination seemed still difficult to decide.

After the inquiry as to the origin had ceased, the severe illness of the child of a friend of the family, unheard of before, led to an apparent solution of the difficulty. It was then remembered that exactly eight days before the attack of the children, a frock had been borrowed from that friend as a pattern; and both the children, being nearly of a size, had tried it on. That frock being a favourite of the child then ill with the scarlet fever, had been hung on the post of the crib to please it; and had been, when sent for, wrapped up in the sick room, and thus conveyed, without thinking of contagion, to the house of the borrower, at a distance of nearly two squares.

A commercial gentleman was accosted at the door of his warehouse by a poor woman who carried in her hand a basket of cakes. She stated that her child was dead of scarlet fever, and that she had been compelled to go out in search of the means of making a decent interment. Wishing to aid the woman, he bought the cakes and the basket, and he and his son, a youth of 15 years of age, without due consideration, ate some of the cakes. About a week afterwards, on the same day, both were seized with a chilliness, followed by fever, sore throat, and scarlet rash, characteristic of scarlatina, and were subsequently very ill. At that time scarlatina prevailed in the district of Southwark, but the narrator does not know of a single case in *the city* proper. The *woman was from Southwark.*"—*Philadelphia Medical Examiner.*

AN

INTRODUCTORY LECTURE,

Delivered, October 1st, 1846,

AT THE OPENING OF THE YORK MEDICAL SCHOOL.

By Thomas Laycock, M.D.

Licentiate of the Royal College of Physicians, London; Physician to the York Dispensary; and Lecturer on the Theory and Practice of Medicine.

Development and connexion of medical studies: their wide range founded on the comprehensiveness of the human organism: the labour of teaching and acquiring alleviated by the pleasure afforded, and by distribution of subjects; opportunities for the study of clinical and forensic medicine in York; necessity for mental training; how secured; a thorough knowledge of the English language requisite; and French and German recommended; York a suitable site for a collegiate institution; outlines of the course on the theory and practice of medicine.

The topics which may be introduced into a discourse of the kind I have been appointed to deliver, are so numerous that a difficulty arises as to a proper selection. On the present occasion, I think there are circumstances to be noticed which belong to our individual position; we are the teachers and students of a *provincial* school. There is much of meaning in that word provincial; much having reference to the difficulties and advantages proper to our position here as members of the medical school established in the city of York. I will refer to these before the close of my address; at present, I propose confining myself to a general review of the objects of medical studies, and the branches of science which they comprise.

The great and principal object of medical study and teaching is the art and science of medicine, using that word in its largest sense. Now medicine, in this large sense, proposes to prevent and relieve as well as to cure disease in man; it proposes to prolong life; it proposes to perfect human society and the human organism. And out of these objects of medical art and science arise the subdivisions of medical studies. Imperfection and disease are dependent upon imperfection and disorder of structure and function; a knowledge of healthy and normal structure and function in man is necessary, therefore, to the attainment of a proper knowledge of the former; or, in other words, human anatomy and physiology must constitute the basis of all medical studies.

The anatomy and physiology of man comprises indeed in itself a mighty range of inquiry. By these we lay bare the secret springs of that wonderful microcosm; we trace the wonderous machinery by which the multitudinous processes of that exquisite scheme of organized matter are carried on; nay, we even essay to penetrate into the innermost recesses of thought, and to unravel the complex links which join the Material with the Spiritual. Man, being, so far as we know, the perfection of terrestrial life—the crowning workmanship of the Divine Artificer—comprises within his organism the processes and functions of all inferior creatures and organisms. Properties of vital matter but imperfectly shewn in these are perfectly manifest in him. The nutritive and secretive processes of vegetable life; the contractile forces of the zoophytes, those links between the animal and vegetable kingdoms, —the muscular motions and sensations, and the mysterious power of instinct in the higher and more perfect creatures, are all to be found in man, who alone is conscious of his relations to the Deity, and has a knowledge of himself as a rational and moral being.

This grand comprehensiveness of the human organism leads the medical pupil—the student of human nature—far away into the world around. Phytology, or botany, and zoology, are both necessary to a proper study of comparative anatomy and physiology, just as comparative anatomy and physiology are necessarily required to elucidate the anatomy and physiology of man.

A slight glance at vital organisms is sufficient to assure us that all vital acts are maintained by forces proper to organized matter; and further analysis has rendered it probable that these may be resolved into some of the primary forces of matter. Thus the student is led into the domains of natural philosophy, and extends his inquiries to the sciences of thermotics, general, pneumatic, and organic chemistry, and electrics.

But when the student has mastered vital *dynamics*, vital or animal mechanics remain, and he has to apply hydraulics and mechanical philosophy to an elucidation of the motion of fluids through tubes, and of the simple and compound levers by which muscular movements are performed; he has to study optics that he may know the laws of vision, and has to apply himself to acoustics that he may understand the mechanism of the sense of hearing.

Nor is his task then half completed. The study of the functions of the nervous system, and especially of the brain, opens to him the wide and obscure domains of metaphysics and mental philosophy; he cannot overlook the facts of phrenology; while the study of the action of external agencies on the nervous system lays before him a field of inquiry of illimitable extent. The effects of climate and atmospheric changes on the organism demand a knowledge of geology, climatology, and meteorology for their elucidation; while the changes induced by civilisation and the circumstances of social life, open out to his view the sciences of political and social economy and vital statistics.

Such being the cycle of knowledge by which the medical student seeks to attain to a thorough acquaintance with healthy structure and function, pathology, or the doctrine of diseased structure and function, requires no less; for it is made up of pathological anatomy and pathological physiology or nosology. Without this knowledge we cannot understand congenital mal-conformations, or morbid transformations of tissues, or abnormal changes in the form and functions of organs, and the like; or the operation of those agents which act as remedies, and restore to health or relieve. The art of medicine, or the medical sciences *applied*, may be divided thus:—1, medicine proper, comprising general therapeutics; 2, surgery; 3, obstetric medicine; 4, psychiatrics, or the treatment of the insane; 5, political or state medicine. These great divisions have been further subdivided. Thus surgery has been divided into civil and military; state or political medicine has the subdivision of public hygiene, forensic medicine, including toxicology, and medical police. Private or individual hygiene may be considered a branch of general therapeutics, which also includes materia medica, medical botany, and pharmaceutical chemistry.

Such is the wide scope of medical inquiry and study; such the immense field for professional practice and usefulness; so wide, indeed, and so immense, that never yet has the intellect of one man, however great or powerful, been equal to the grasp of the whole. Yet this consideration ought not to appal the student, but, on the contrary, should stir up his energies. It ought, indeed, to be to him a matter of the highest gratification, that so wide a field of intellectual effort is his in right of his profession; that the study of man, the perfecting of his nature, and the solace of his sufferings, is to be the business of his life. No pursuit in which a human being can engage conduces more, in my opinion, to individual happiness, than the study and practice of medical science and art; independently of pecuniary considerations, they bring with them the most substantial gratification if diligently followed in a true and sincere spirit of devotedness. Certain it is, that untiring industry and singleness of purpose, will be fully rewarded.

The toil, however, is not after all so great as it would at first appear; the subdivision of labour facilitates much the task of both the student, the teacher, and the practitioner; and I think I may say, that the industrious pupil of the York Medical School will not want all the aid and encouragement he may require. It is one of the difficulties with which the *teachers* have to contend, that the students being few, the stimulus to effort on their part is less than in schools of greater magnitude. But, as I am convinced that pecuniary considerations cannot and do not weigh with the teachers, so much as an earnest wish to send out able and accomplished practitioners, the students may much assist and encourage their teachers by displaying a corresponding anxiety on their part to make the best use of the opportunities afforded to them for the acquisition of knowledge. And it may be observed, that the difficulty to the teacher is a gain to the student, because the latter is enabled to come into closer personal contact with the former. In larger schools the opportunities, especially for that most important branch of study, hospital and dispensary practice, are diminished just in proportion as the number of students increases; for the crowding of pupils at the bedside and in the consulting room, is most unfavourable to the acquisition of clinical knowledge. Hence it is a fortunate and favourable circumstance for the student that nothing of the kind happens here; and when (I may add) the contemplated enlargement of the hospital takes place, the advantages I allude to will be doubled. With regard to hospital and dispensary practice I would observe, that the most common-place is that which is really the most valuable, and which should engage the student's special attention; for upon his success in the treatment of common cases will depend his professional advancement. But, in fact, no case is uninteresting to the thoughtful inquirer, and certainly the study of an ordinary example of fracture, or of gastrodynia, will be infinitely more useful than witnessing a case of amputation at the hip-joint, or of ichthyosis. A student should aim at something higher than the mere gratification of a professional curiosity. I do not mean to say that the usual proportion of singular or extraordinary cases are not witnessed in our hospital and dispensary practice; but what I wish to impress upon the students' minds is, that here they may become practically acquainted with every form of disease they are likely to meet with in after-life.

With regard to the other branches of knowledge, I may venture to affirm that a fair opportunity will be given the student of acquiring a thorough acquaintance with each. The assizes of a large county being held in the city, the lecturers on forensic medicine will be enabled to make *their class practically acquainted with this important and harassing department of professional labour*, and I believe they are prepared to give what may be termed forensic demonstrations. The laboratory of the Yorkshire Philosophical Society, of which the Lecturer on Chemistry is the curator, may be made an excellent school for practical chemistry. The splendid museum of geology, and the valuable collections in zoology and comparative anatomy, of the same society, are not placed there for country visitors to stare at, but for the purposes of instruction; and nothing would, I am sure, give greater pleasure to Mr. Charlesworth, the curator, than to facilitate their application to educational uses, and make them available to the student. The Herbarium of the society of which our Lecturer on Botany is the able curator, can also be rendered useful to the pupil. I may add, too, that our own museum (comprising the collection of the late Mr. Atkinson) contains numerous illustrations of obstetrical and surgical pathology, and will, I hope, be shortly rendered more complete in other departments. All, then, that is really wanted to make this school successful, in the best sense of the term—successful, I mean, in sending out able and successful practitioners, is a willingness and an earnest desire on the part of the student, to avail himself of the opportunities and facilities presented to him. With regard to public hygiene and the science of vital statistics, I may observe, that as soon as a class is formed, I will myself, if permitted, undertake the duty of communicating to it, in a regular course, all the knowledge I possess on those subjects; and if a special course of comparative anatomy be requested by the pupils of this school, I feel confident that their wishes will receive the best attention of the teachers, and arrangements be made to meet them effectually.

I cannot, however, close this discourse without adverting to the necessity of a sound mental training, and an acquaintance with classical and general literature on the part of the medical pupil. The wide extent of study comprised in a good professional education can never be fully mastered by him, unless his mental powers be rightly directed and assisted. He must form habits of quick observation and sound deduction. He must be able to profit by past experience, and by the experience of contemporaries as well as by his own; and, to do this, he must be able to discriminate quickly, and almost instinctively, the true from the false; for there are, in medical literature, as many false as true facts. The habit of close and accurate observation and deduction is, I am inclined to think, to be obtained, firstly, by a study of a good system of logic and mental philosophy. I do not know a book more suitable to the young student than Dr. Jamieson's "Grammar of Logic and Intellectual Philosophy." It was written for the use of schools and private instruction, and, if carefully studied, will answer the purpose tolerably well. Secondly, the study of mathematics should be followed, or, at least, the mathematical knowledge acquired at school should be kept up by devoting one single hour in a week to this purpose. Thirdly, chemical science, carefully pursued, will be an admirable means of forming habits of accurate observation and a correct appreciation and analysis of phenomena. These three means combined,—logic, mathematics, and chemistry (or the union of the two),—will be amply sufficient, if duly used, for the purpose of mental training.

Next come the aids to the acquisition of knowledge; and, in the first place, a thorough acquaintance with the English language is indispensable. It may seem unnecessary to allude to this; but I have often had occasion to notice that false knowledge has entered the mind from the want of it—from a want of the due appreciation of the meaning of English words—of the true and exact sense in which they are used. I think that a knowledge of the French language is scarcely less necessary. If this has been already acquired at school, it should be kept up by the occasional perusal of French authors. I should also advise the acquisition of the German language. Many excellent medical works are written by Germans which are never translated into English or French; and he who is able to read them has a decided advantage in the race of life over the practitioner to whom they are totally unintelligible from an ignorance of the language in which they are written. Where so much has to be acquired, it would be a waste of time to endeavour to attain to a critical knowledge of Greek and Latin, at least of the former. The ability to write elegant Greek poetry, or to read Hippocrates without the aid of a dictionary, would not advance the student much, if at all, and would interfere certainly with more important studies. Some knowledge, however, of Greek is necessary; just so much as to understand the numerous technical terms derived from that language, or to devise a new term, if that should be rendered necessary by discoveries in medical science. As for Latin, the student should certainly be able to read it with tolerable ease, because many excellent works are yet written in Latin; and the precise meaning of many English words can only be attained by a knowledge of this, the tongue from which they are derived. In this latter respect, both French and German are also useful languages to know.

It should, I think, be matter of regret that we have no institution in this city in which the medical student could be specially fitted for the pursuits of his future life. York is admirably situate for such an institution. Placed midway between the populous agricultural and manufacturing districts of the county; already abounding in educational establishments of superior pretensions; the seat of an archiepiscopal see; free from the turmoil of immense commercial and manufacturing establishments; and with a large proportion of members of the intellectual professions resident within its walls—the advantages it offers for the establishment of a collegiate institution of the kind I allude to are, I think, of no trifling character. I trust that, as these become better known, they will be rendered available; and we shall have the foundation of a college laid which shall fully meet the wants of the present intellectual life of the north of England. The York Medical School may then be the nucleus of a medical faculty or college for the great and populous county of which it is the metropolis. The actual establishment of a Queen's College at Birmingham, and the prospective establishment of a similar institution at Manchester, are significant of rapid progress there, and ought to stimulate us to efforts in a like direction.

In a lecture introductory to the general business of the session, a lengthened allusion to that department which has been entrusted to me would be misplaced. I will only announce, therefore, that I propose to commence my course with the general principles of pathological anatomy and physiology, and shall afterwards apply these to special nosology. We will first review the phenomena and laws of analogous formations and transformations of tissues and organs, distinguishing between the progressive and regressive in the great textile divisions of the organism. We will then discuss the pathological anatomy and physiology of the capillary system, and review the changes consequent on inflammatory action and congestion, including serous effusions and hæmorrhages. Next heterologous formations will come under notice, as the link between the pathology of the capillaries and of the blood; and immediately after these, general etiology, including the doctrines of temperaments, diatheses, and cachexiæ, the laws of hereditary transmission and susceptibility, and the influence of age, sex, &c. Then general semeiology will require our attention; and this will lead us on to the phenomena of inflammation and of fever, and conclude the first division of the course. Special nosology will occupy the second division, in which every system of organs will have a separate consideration. In short, the general principles of the first division will be repeated and specially applied in the second. I will add one word as to prizes. I may probably acknowledge the attention and diligence of the most diligent of my class by some special and visible mark; but I would strongly impress upon the students generally, that a prize, far more worthy their notice than a medal or a book, is to be obtained by them in the friendship and esteem of their teachers. This prize, fairly won, will, I can assure them, do them good service when they come upon the professional battle-field, and may, indeed, exercise a predominant influence on the whole of their future life.

PHOSPHORESCENCE OF THE HUMAN BODY.

THE subject of this case was a male infant sixteen months old. The child had suffered from teething, and had been casually seen by Dr. H. M'Cormack, of Belfast. An emetic was administered, and an irritating liniment rubbed on the breast. The nurse, in raising the child in bed at night, observed a phosphorescent light about the hips, both before and after the candle had been lighted. The legs were also observed to be luminous for a short time. From what Dr. M'Cormack could learn, the appearance very much resembled that produced by phosphorized oil, but none of this had been employed. The phenomenon occurred only once. The mother had, however, observed, that on one occasion a spark (electrical) had flown to her hand from the infant's body. Cases of human phosphorescence in the living body are rare, and the fact recorded by Dr. M'Cormack is, therefore, interesting.—*Edinburgh Medical and Surgical Journal*, October 1846.

TREATMENT OF UMBILICAL HERNIA.

M. MEYNIER recommends for the treatment of this form of hernia, whether congenital or acquired, the simple application of slips of strongly adhesive plaster over the hernial opening. He condemns the employment of any round or projecting substance, as it tends to keep open the aperture through which the hernia protrudes, and, therefore, to prevent its closure. The slips of plaster will serve to keep back the intestine, and the rest may be left to nature.—*Gaz. des Hôpitaux.*

⁂ There is nothing very novel in this suggestion. This practice has, we believe, been long since successfully adopted in England. According to our observation, the following plan of treatment has been uniformly successful in infants:—A small circular pad, made from thick amadou (German tinder), spread with adhesive plaster, is placed over the aperture, and this may be kept in its place by a larger circular plaster spread on white leather. The plasters will require occasional renewal.

Original Communications.

THE SCOTCH EPIDEMIC FEVER. OF 1843-4.

By JOHN RICHARD WARDELL, M.D. Ed.
Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 465.]

VII. *There were an unusual number of jaundiced or "yellow-cases," and with these were often associated a dark, coffee grounds-looking (and in some instances) black-vomit.*

AN icterous condition of the skin, when associated with black-vomit, are by most writers[*] considered as the grand and distinguishing characteristics of the true Mediterranean and West-Indian yellow fever. Other authors, however, who have witnessed much of, and described that disease, do not attach such paramount importance to the symptoms mentioned, but rather form their diagnosis from an assemblage of symptoms than from those two particular states[†]. It is abundantly evident, when those symptoms do occur, that the mortality is then very high; and this fact has been observed from the earliest times. Yellowness[‡] of the surface is sometimes met with, though seldom in the ordinary continued fever of this country[§]; and there is scarcely any great febrile visitation on record where a certain proportion of jaundiced cases, however small, are not noticed; yet, upon a thorough investigation of the cases manifesting this symptom, it would generally be found that some ancient lesion in, or particular cause of predisposition of, the liver existed, that would readily, under the influence of an acute disease, develop the jaundiced condition. When, however, it occurred so frequently as it did in the seven days' fever, and where no traces could be ascertained of any previous disorder in the biliary apparatus, we are compelled to attribute the disorder in question rather to certain specific and inherent properties in the nature of the poison giving rise to the disease, than to casual circumstances. Some of the Scotch physicians were of opinion that the distemper was veritable yellow fever, to which, as will hereafter be shewn, there were some tallying diagnostic marks; yet at the same time there were negative facts arguing weightily that the two forms were not identical.

---

[*] Père Dutertre, Monro, &c.

[†] Picknard, Jackson, and others.

[‡] Hippocrates, I. IV. and XII. Sec. Prognostics. Celsus, Galen, &c.

[§] Christison, Tweedie's Lib. Pract. Med.

Those who have described that particular kind of disease common to the shores of the Mediterranean and the West Indian Islands, variously known under the names of Fièvre Matelote, Bulam-Fever, Mal-de-Siam[*], Vomito Prieto[†], Yellow Fever, &c. record an affection which, during its visitations, is generally of the most fatal character; indeed, in some attacks, its mortality has been quite appalling, and in every respect deserving the epithet pestilential; and we find that most of the older Spanish authors call it a pest[‡]. The accounts given of the yellow fever by Wilson, Chisholm, Bancroft, Blane, Gillkrest, Burnett, Fraser, Henner, O'Halloran, Veitch, Denmark, Boyd, &c.; by various foreign authors, amongst whom may be noticed Salva, Rush, Humboldt, Palloni, Tommassini, Gastelbondo, Hurtado, Pariset, Arejula, &c.,—all of these assert the yellow-fever to be a most fatal distemper, and we find, from the accounts given by the majority of these authors, that mortalities in different parts of the world to which it is common have been as great, even in recent years, as the plagues and pestilences of earlier times[§].

When we remember that in the seven days' fever there was a very unusual number of yellow cases—that some of these were not merely tinged, but varied in every degree of intensity from a lemon hue to an ochre yellow, and that in some instances death was preceded by the vomiting of an inky-looking fluid—that dark livid petechiæ were common, and vibices sometimes observed—that these yellow cases were far more fatal than the ordinary form of the fever without this complication—that the symptoms in question hurried on with great rapidity, together with other considerations, we are compelled to admit that the fever known at Gibraltar, Malaga, Barcelona, Seville, Barbadoes, Jamaica, Demarara, &c. was in no slight degree resembled. Upon a more rigid examination of facts, and on a more extended view of the question considered, it then seems impossible to conclude that the epidemic of 1843-44, and the true yellow fever, were really identical. 1st. Because the yellow fever, when it has manifested itself in a distant country, has generally been traceable to such country by means of shipping, and the first cases were mostly confined to the neighbourhood of the harbour or docks of such place of importation,—facts not mentioned with regard to the Scotch fever. 2dly. Most writers attribute its propagation so much to the influence of malaria, as to affirm that where the yellow fever breaks out there has often been some prominent and indisputable cause of such malaria, as by the inundation of a river, the cleansing of docks, the turning up of large quantities of fresh soil, &c. 3dly. It usually prevails but in hot seasons, after the atmospheric temperature has reached a certain degree of heat,[*] and it is in general effectually checked on the setting in of cold weather: now the very first cases of the Scotch epidemic were noticed in Glasgow in the month of December 1842, and from this time continued to increase.[†] 4thly. In yellow fever a very great proportion of the cases are more or less yellow, while in the seven days' fever the greatest average in the Edinburgh hospitals was 1 in 8, although in Dundee, at one period, it ran so high as about 1 in 4.[‡] 5thly. Black vomit is the frequent prelude to death in the one form of disease, whilst it was only in a few rare instances seen in the other. 6thly. Almost all writers whom I have read on yellow fever mention as a diagnostic symptom great injection and redness of the eyes[§], a characteristic in the epidemic usually scription of disease that rages in the countries on the Mediterranean, and in the West Indies, death often takes place within forty-eight hours, and mostly about the end of the third day, but I do not remember a single instance in the distemper now treated of in which a mortal issue supervened so soon. 8thly, and lastly. The average mortalities in yellow fever epidemics, are, as above noticed, often very high, the proportionate number of recoveries being a mere fraction, whilst in the seven days' fever the average of deaths was very small †. From these facts we can scarcely become reconciled to the opinion propounded by some who paid much attention to the Scotch fever, that it was essentially the same distemper as that common to the places spoken of abroad; although, as advanced before, coincidences seemed manifest that were not easily explained away.

---

[*] Père Labat.

[†] *The Portuguese term for black is prieto.*

[‡] *Garcia, Suelto,* Villalba, Porcel, &c.

[§] *Harness, Monro,* Gray, Glasse, Piendo *Johnson, Alfonzo-de-Maris,* Bone, &c.

[*] It has been remarked that the yellow fever in Philadelphia does not rage unless the temp. be 79° Fah.

[†] See paper No. III. of this Series.

[‡] Vide Tables IV. V. VI. VII. and VIII.

[§] Rush, Thompson, Gillkrest, &c.

Upon reference to the work of Dr. Welsh, before quoted, it is shewn that the proportion of yellow cases in the fever which he has described was as 1 to $30\frac{3}{4}$‡, and this symptom was observed in about 1 in $8\frac{1}{2}$ of the fatal cases. In my own statistics it will be found upon referring to Table No. IV. that out of 330 cases, 37 or 1 in 8·91 were yellow; in Table V. out of 80 cases there were 7, or 1 in 11·42; in Table VI. (compiled in January 1844) out of 450 cases, 28 or 1 in 16·07 were yellow; in Table VII. there were 4 out of 40, being 1 in 10; and in Table VIII. which was formed in April 1844, at the decline of the epidemic, and which gives particulars respecting 80 patients, only 2 of that number, 1 in 40, were decided yellow cases. Now these statements are worthy of some attention, as we see that in January 1844 the proportion was nearly threefold greater than in the month of April of the same year, when of course the temperature could not fail to be several degrees higher. In the aggregate of yellow cases, as extending over a period of many months, out of 989 patients 78 were jaundiced, being 1 in 12·06 of the whole number. Dr. Christison, when writing on fever,§ says that the complication of jaundice is a rare affection, and asserts that it is most frequently noticed during the autumnal months; the last assertion is fully verified by my own data from time to time given in those communications. Some physicians have contended that the complication of jaundice is of most usual occurrence in those epidemics which are of an inflammatory type. Now the fever of 1817-20 was of a far more sthenic character than that of 1843-44, yet the number in the former was considerably less than that in the latter, which could not be considered of the inflammatory order, but rather belonging to the asthenic or adynamic type of nosological classification. These apparent inconsistencies amid the phenomena of febrile diseases, are so difficult of solution, in the present state of our knowledge, as to render our wisest reasonings too often abortive and erroneous; nevertheless, if we could but penetrate into the arcana of nature, all those multifarious effects which, when their causes are imperfectly understood, so puzzle and perplex the acutest minds, would then seem legitimate and highly probable conclusions, nor would any effect be manifest without its precisely correspondent power of causation; and it is by the constant and careful observation of the operations of nature,—the reflective study of the manner in which she works her ends, that those results which the world terms discoveries are made,—that the researches of science are enlarged, and our capabilities of contending with the ravages of disease increased and strengthened.

The first appearance of the accession of jaundice manifested itself in the conjunctivæ, which were at first slightly tinged, and then increasing in different degrees of intensity. The neck, face, chest, arms, abdomen, and inferior extremities, then became affected, being at the onset of a light yellow hue; and on the complication being fully developed the surface would in some instances assume a deep ochre-yellow, in others a dusky yellowish-brown, resembling somewhat a mahogany shade. These conditions were never so markedly observed in the inferior extremities, especially about the feet and ankles, as in the other

---

[*] See Paper No. V.

[†] Article "Yellow Fever," in Cyclopædia of Pract. Medicine.

[‡] *Welsh on Fever, p. 73.*

[§] *Tweedie's Library of Practical Medicine.*

parts of the body. Some degree of pain and tenderness were universally experienced in the hypochondria (mostly in the right side) and epigastrium. There was vomiting of a dark-greenish, bilious-looking fluid, generally in large quantity; and in a few odd cases the ejections were black, grumous, and coffee-grounds like, being about the consistency of hare soup: and in one instance which I saw this description of fluid deposited a sediment of inky blackness, which, upon pouring off the supernatant liquid, had a gelatinous appearance, and was somewhat tenacious to the touch; this patient in the course of thirty hours vomited not less than twelve quarts. The bowels were scarcely ever constipated, and the stools were always of a dark colour, manifestly being loaded with bile, often mixed with mucous matter, and sometimes with a black deposit, having the appearance of coagulated blood, similar to that which is witnessed in undisputed cases of melæna. The urine was high coloured, and when in the vessel resembled porter: it tinged linen of a saffron yellow. In some of the worst cases the bed-linen became stained of a yellow colour from the perspiration.* The tongue at the first was covered with a yellowish-white, thick, pasty coat, the apex and edges being clean; this fur, as the affection reached its maximum, became dry, and ultimately of a dark brown or black colour, being cracked and fissured in the centre. On percussion the dulness in the right hypochondrium was to an anormally great extent, and the edge of the liver could frequently be felt protruding below the false ribs.† The skin was hot and dry, sometimes imparting a tingling sensation to the tips of the fingers. In such cases as went on to a fatal termination coldness of the surface, a quick small pulse, hurried breathing, great prostration, contracted pupils, delirium, and coma, were the preludes to dissolution. The urine was often voided in decreased quantity, especially in the worst cases. The parts to which blisters were applied, if in very yellow cases, would on their removal become of a dark blackish brown. Petechiæ were frequently observed, and vibices sometimes noticed; the latter, however, being more rare than the former. Hæmorrhagic discharges by stool were more common (though these were by no means very frequent) than from any of the other internal cavities. In the milder description of yellow cases but little additional disturbance seemed to be added to those already created by the idiopathic fever, although an abundant secretion of bile was well nigh always detected in the alvine evacuations. Such is a brief outline of the leading pathognomonic conditions presented by the jaundiced cases which were presented to my own inspection.

In this part of the subject there are certain considerations which naturally suggest themselves, and to which it may here be well to make a brief advertence.

I. *Was the jaundiced condition in question always preceded by idiopathic hepatitis, or some organic change in the liver, and did it primarily depend upon such morbid states?* On a careful examination of a great number of cases which I had an opportunity of seeing, there was, as previously asserted, some degree of tenderness experienced in the right hypochondrium, which might most expressively be termed a dull, heavy, aching pain; nor did the degree of this seem always proportioned to the intensity of the yellowness, and other accompanying symptoms. Scarcely at any time was that sharp lancinating pain complained of, which is so symptomatic of the serous investment being inflamed, but the symptoms presented gave evident indications of an engorged state of the viscus; which was undoubtedly its real pathological condition. The stools were not clay-coloured, as we see in some diseases of the liver, but always surcharged with bile. If it had proceeded from idiopathic hepatitis, bleeding, leeches, cupping, &c. would have checked the inflammatory action, and with such abatement arrested the progress of the concomitant states; such, however, was not the case, and therefore little treatment was addressed to the region of the viscus, as the primary cause evidently did not wholly exist in this organ, nor was it owing to obstruction in, or pressure upon, the gall-ducts, as they were always pervious*, and filled with their proper secretion. Jaundice, as most are aware, is sometimes occasioned by an inertness of, and the want of proper functional power in the liver; in cases of abscess, tumors and other morbid products being produced in its structure, and causing pressure on some of its excretory canals, in diseases of the lining membrane of the duodenum, &c.; yet none of these conditions were found to account for the yellowness so commonly observed.

---

* Flores Moreno mentions this as sometimes being observed in yellow fever.

† *Difficili bile tumet jecur.*—Hor.

II. *To what pathological causes was the condition in question proximately owing?* If the jaundice had been produced by non-elimination of the bile from the blood, it is fair to presume that the effects upon the system would have been of a more deleterious description, than if first secreted, and then absorbed; and this fact we know to be particularly true with regard to the urine, as the suppression of that secretion is always much more dangerous than when, on account of retention, it is absorbed. In the yellow cases occurring in the epidemic, there were good reasons for believing that the blood was very highly venous; that it was in an unusual manner loaded with those constituents which go to form the bile: it is also a very tenable supposition that the organic influence proper to this organ was affected, which might importantly disorder the function of the organ, and render its secretion of a perverted nature, as we are well aware that the nervous system sometimes acts very powerfully on the liver, even when a person is in a state of positive health, and it is highly probable that it is capable of acting much more so when the system is labouring under any morbid impression; sudden emotions of the mind, as violent fits of passion, excessive joy, an attack of hemiplegia, &c. have been followed by jaundice,† at once proving the influence of the nervous system over the natural actions of the organ. Again, the bites of poisonous animals‡, as also surgical operations, and severe wounds§, have been occasionally succeeded by jaundice, proving the effects of the same; hence, from these facts, it seems a rational inference, that some obscure perversion in the organic nervous influence proper to this organ, being proximately produced by certain inherent conditions in the poison giving rise to the fever, by the operation of which it was highly stimulated to excessive functional action, together with the state of the blood above mentioned, might in some measure, if not very importantly, account for the conditions now treated of. In recapitulation, then, it may be said, relative to this particular part of the inquiry—1st. That the blood was highly venous, and contained an anormal quantity of those matters which go to form the bile. 2dly. That the nervous organic influence proper to the liver, being affected by certain unknown properties in the poison producing the fever, by which its functional action was morbidly increased; thus the former and latter causes giving rise to great engorgement of the viscus. 3dly. An inordinate quantity of bile being secreted it was carried in an anormal degree to the duodenum, from whence by the powerful efforts to vomit it was poured over the internal surface of the stomach, and the fæces being greatly impregnated with it, the secretion was thus in a morbid manner brought in contact with the whole surface of the digestive canal, from which (as well as from the liver itself, seeing that it was so engorged and acting with an increase of functional power), the absorbents would carry it into the current of the circulation, and thus every tissue of the body would become discoloured. 4thly. It may also be presumed, that the venous blood, by possessing such a very great proportion of those constituents which constitute the bile, and the liver being morbidly surcharged with this viscid secretion, that its secretory powers were unequal to the task of efficiently separating the bilious matter from the venous fluid, and thus another cause be superadded to those above enumerated in the induction of the appearance now considered.

III. *It may lastly be inquired as to the manner in which death was caused in the severer forms of the yellow cases.* It has been stated above that the jaundiced cases gave indubitable evidence of a redundance of bile; and it is also said that more or less suppression of urine was an accompaniment to other symptoms manifested in the worst of these cases. Thus, then, it may easily be imagined what effect would be produced in the system by an undue quantity of the active principles of these two secretions (cholesterine and urea) circulating in the blood, and thus acting upon the vital organs; and from an attentive observation of many cases of this kind which came under my notice, the brain and spinal marrow seemed to be less affected, when the bowels were slightly acted upon, and strong diuretics administered, thus carrying off these secretions, which, if not promptly removed from the system, appeared to exert their pernicious influence. I do not, however, mean to affirm that death was altogether caused by the agency of these deleterious principles; only they seemed to act an important part amid the train of the other febrile phenomena. In some of those patients who died with the yellow complication, towards the close symptoms very much like those produced by a narcotic poison were apparent; the surface became cold and clammy; the patient laid in a helpless manner on his back; the pulse was weak, the pupils contracted, and delirium and coma wound up the scene. Hence it is an unavoidable conclusion to be arrived at, that the great nervous centres laboured under some potent and depressing agony, in addition to the specific poison of the fever.

---

* Drs. Alison and Henderson, as well as other physicians, stated, that in all cases of post-mortem inspection which came under their notice the ducts were pervious.

† Chapman, Valsalva, *Lanzoni, Baillie, &c.*

‡ *Van Swieten, Bartholin, &c.*

§ *Sir George Ballingall.*

[To be continued.]

CASE OF

EXTENSIVE LACERATION OF THE ORGANS OF GENERATION.

By J. Snell, Esq.
Surgeon, Hafod, South Wales.

The accident which originated the mischief was as follows. A boy, twelve years of age, was climbing up a rope to the end of which a hook was attached: by some mischance his hands gave way, and he fell backwards "head over heels." In his descent, the point of the hook caught his trowsers, penetrating the integuments just above the pubes, and tearing back the whole of the genital organs close to the anus.

When first I saw the laceration (some hours after), the injured parts presented a very novel appearance. The sufferer was in bed, and, on my separating the legs, nothing appeared of the genitals but what resembled a lump of fat or an undistended bladder lying close to the anus. The testicles were hanging by the spermatic cords on each side, and I was informed that but trifling hæmorrhage had ensued. Upon examining this mass of apparent fat, I made out the penis, scrotum, &c., but all corrugated and shrivelled up, cold and bloodless. These I stretched out into shape, and found that, by a little careful and nice adaptation, they could be made exactly to fit the torn surface above. Having next returned the testes, and accurately adjusted the parts with numerous stitches, the whole was retained in proper position. These were supported in every needful direction by strips of isinglass plaster spread upon ox-gut. The whole was then covered with carded wool, until warmth and vitality were perceptibly returning to the detached portion.

I confess that I entertained considerable doubt as to the probability of adhesion, and felt not a little anxious, during the three succeeding days, lest sloughing should ensue.

The isinglass plaster, from its transparency, allowed me to see distinctly how the case was progressing without disturbance of the parts; and I was much gratified, on the day following, to perceive that not only had vital warmth been restored, but also that they were agglutinating most satisfactorily.

Finding, on the third day, that the isinglass plaster yielded sufficient support to ensure local apposition, I cut the stitches least required, and continued to do so daily.

The parts gradually healed, and, with the exception of one or two spots which were a little puckered, and in which granulations appeared, the whole of this extensive laceration healed by the first intention; and I need scarcely add, under circumstances which little warranted the hope of such a termination.

This case adds to the evidence of Nature's power in the restoration of injured structure, even where most extensive, especially when aided by artificial agency. The latter restored the severed portions to their right positions; the former, to vital union and healthy action. It is but little that *art* can do, and the less officiousness displayed the better; but that little is often *most valuable*, since, without it, nature herself may become powerless to befriend.

CASE OF
SLOUGHING OF THE PENIS.
BY JAMES KIRK, ESQ. M.C.

MAY 26th.—Was called to see William W——, district patient, aged 59, a servant in a spirit-cellar, who was suffering from sloughing of the penis in consequence of an injury received eighteen days ago. He had been thrown down and kicked when coming home late at night. On the day following the part was black. He then went about for a week, but has kept his bed ever since. Has had no treatment.

On examination, found the whole penis in a state of mortification, black and putrid, and a line of separation beginning to establish itself between the dead and living parts. This was deepest at the under part of the organ, where the penis passes into the scrotum, and where it had already divided the urethra. Pulse weak, about 60; bowels slow; tongue foul; has no pain, except at the line of separation, and little constitutional disturbance. The thirst and fever which were present last week are now nearly gone. To take 5 grs. carb. ammoniæ, and 1 gr. opium, three times daily; to cover the penis with a yeast poultice, to be changed three or four times daily; and to protect the ulceration at the upper part of the scrotum from the action of the urine by lint spread with resinous ointment.

27th.—Continue; and take 4 oz. of Port wine daily.

June 1st.—Going on favourably; bowels costive. To have an ounce of castor oil. Continue.

6th.—Penis nearly separated; bowels slow. Repeat the castor oil. Continue.

9th.—Going on well; removed the penis by dividing with the scissors the fibrous covering of the corpora cavernosa, by part of which it was still connected to the pubis. To stop the powders and poultices; continue the wine, and *repeat the castor oil, the* bowels being costive; the ulcerating surface to be dressed with resinous ointment.

11th.—Sore suppurates very profusely; patient makes water easily through an ivory tube, the end of which is placed over the stump of the urethra. To change the resinous ointment for Turner's cerate. Continue the wine.

13th.—Sore looks well, but still suppurating very freely; bowels costive; sleeps badly. To have an ounce of castor oil and thirty drops of solution of acetate of morphia at bed-time. Continue the wine, and bathe the sore twice daily with solution of acetate of zinc.

16th.—Sore healing fast; bowels costive; seems very low-spirited. To have 10 grs. colocynth and 5 grs. blue pill. Continue the wine and morphia; also the wash and ointment.

20th.—Has no complaint; general health very good; sore cicatrizing rapidly. Continues to have castor oil if required.

July 1st.—Going on very well; sore nearly healed up; has no complaint. Continue.

After this date the sore ceased to cicatrize for a time; but the skin was at length brought over the face of the little stump by the daily use of a 10 gr. solution of nitrate of silver; and the patient has now been a good many weeks at his work.

Glasgow, October 1, 1846.

ECONOMICAL EMPLOYMENT OF URINE IN AGRICULTURE.

A COMPANY has just been established in Paris for the purpose of collecting and applying to economical purposes the urinary secretions of the inhabitants of that city. According to the prospectus, the daily loss of urine in Paris amounts to nearly 200,000 litres (52,825 gallons). The company congratulate the subscribers on the prospect of one-half of this enormous quantity being collected by the proper application of buildings, stations, tanks, &c. &c. They announce that 25 gallons of urine are equal, in manuring properties, to 50 lbs. of the best cattle dung. The plan proposed by the company, is to evaporate the aqueous part of the urine without losing the ammoniacal salts. This inspissated extract is then to be worked into magnesian and calcareous earth, and in this way a very portable and highly valuable manure is at once produced.—Gaz. des *Hôpitaux*.

MEDICAL GAZETTE.

FRIDAY, OCT. 9, 1846.

In some remarks which we had occasion to make about a year since*, on the curriculum of the Apothecaries' Society, we commented upon what we considered to be one of its most serious defects, *i. e.*, a petty interference with teachers and pupils respecting the number of lectures to be delivered on a particular subject, and the precise season of the year, and period of study, at which such lectures should be attended. We contrasted it with the curriculum of the University of London, and with that of the Royal College of Surgeons in Edinburgh: in both of which some latitude is given to teacher and pupil; and the latter, for whose benefit such regulations are professedly intended, is not compelled to attend to one subject, when he might, perhaps, more conveniently, and with greater profit to himself, be giving his attention to another. The Council of the University of London require that the candidate shall have devoted a certain period of time to his studies in a recognized school; but they do not fix the number of lectures for each subject, or the seasons of the year at which such lectures should be attended. The Royal College of Surgeons of Edinburgh recommend, but do not absolutely enjoin, a certain order of study.

It is with some satisfaction we observe, in the Regulations issued for the present session by the Society of Apothecaries, that an approximation has, in one respect, been made to the curriculum of the University of London. Thus, in the present regulations, there is no specification of the *exact number* of lectures required on particular subjects, this being left, as it ought to be, to the discretion of the teacher. Under the old system, the rule was always practically evaded; for even admitting that the precise number of lectures was delivered, they were rarely attended throughout, except by a small minority of the class: and thus, while the regulation did not benefit the pupils generally, it imposed a heavy labour upon the conscientious teacher. The Society have, however, still retained in their curriculum the old triennial division of study, specifying what course of lectures is to be attended at one period, and what at another. The winter session is to consist of not less than six months, and is considered to extend from the 1st of October to the 31st of March (six months). The summer session is to extend from the 1st of May to the 31st of July (three months). As there is a little difference in the course of study for 1845 and 1846, we here subjoin extracts from the Regulations, in order that they may be easily compared.

Course of Study, 1845.

First Winter Session.	Chemistry. Anatomy and Physiology. Anatomical Demonstrations. Materia Medica and Therapeutics; this course may be divided into two parts of fifty Lectures each, one of which may be attended in the Summer.
First Summer Session.	Botany and Vegetable Physiology; either before or after the first Winter Session.

---

* Vol. xxxvi. p. 991.

SECOND WINTER SESSION.	Anatomy and Physiology. Anatomical Demonstrations Dissections. Principles and Practice of Medicine.
SECOND SUMMER SESSION.	Forensic Medicine.
THIRD WINTER SESSION.	Dissections. Principles and Practice of Medicine;

Midwifery, and the Diseases of Women and Children, two courses, in separate Sessions, and subsequent to the termination of the first Winter Session.

Practical Midwifery, at any time after the conclusion of the first course of Midwifery Lectures.

Course of Study, 1846.

FIRST YEAR.	WINTER SESSION.	Chemistry. Anatomy and Physiology. Anatomical Demonstrations. Materia Medica and Therapeutics; this course may be divided into two parts, one of which may be attended in the Summer.
	SUMMER SESSION.	Botany and Vegetable Physiology.
SECOND YEAR.	WINTER SESSION.	Anatomy and Physiology. Anatomical Demonstrations. Dissections. Principles and Practice of Medicine. Medical Practice.
	SUMMER SESSION.	Medical Practice. Forensic Medicine and Practical Chemistry. Morbid Anatomy and Clinical Medicine.
THIRD YEAR.	WINTER SESSION.	Dissections. Principles and Practice of Medicine. Medical Practice. Morbid Anatomy and Clinical Medicine.

Midwifery, and the Diseases of Women and Children, two courses, in separate Sessions, and subsequent to the termination of the first Winter Session.

Practical Midwifery, at any time after the conclusion of the first course of Midwifery Lectures.

By the regulations of 1845, students were required to produce testimonials of attendance on a course of clinical lectures, and of instruction in practical chemistry and morbid anatomy; but in the curriculum of 1846, we find it specified *when* and *in what order* these supplementary subjects must be attended. Thus the period of attendance on practical chemistry, morbid anatomy, and clinical medicine, is fixed for the summer session of the second year, and must be attended at the same time as forensic medicine; or, if there be an option, it is only with respect to morbid anatomy and clinical medicine, which may be attended in the winter session of the third year.

If these rules as to the periods of attendance be strictly enforced, we have great doubt whether the results will be satisfactory. The necessity for attendance on practical chemistry in the summer session of the second year appears to arise from the fact, that the knowledge of the student requires to be revived in respect to a science the principles and practice of which he has been hitherto assumed to acquire, according to the regulations, during the first six months of his studies! The evil effects of thus laying down rules upon subjects which, in properly constituted schools, should be left to regulate themselves, are now in great part counteracted by the payment of a consolidation fee, in all the principal schools, metropolitan and provincial. Thus, although the student may attend and receive his certificate for the period which, in the opinion of the Apothecaries' Society, is best adapted for the study of a particular science; yet, under the new mode of entering, students will be at liberty to attend, as opportunities may occur, any course of lectures at any period of their triennial residence.

The new regulations are not sufficiently explicit on one point, namely, the attendance on practical chemistry. Lectures or demonstrations on this subject being now definitely fixed for the summer session of the second year, these must, we presume, be henceforth regarded as quite distinct from the lectures on general chemistry, attendance on which is fixed for the winter session of the first year. If this be the case, and the subject of practical chemistry be properly taught, an additional expense is likely to fall upon students, or an additional sacrifice will be entailed on Collegiate institutions. Thus while most of the principal medical schools have laboratories attached to them, in which practical instruction may be perfectly carried out, yet in some of these, owing to the necessarily increased outlay in apparatus and chemicals, a very heavy additional fee is demanded. In order, however, to meet the views of the Society, these laboratories for practical chemistry are only required to be open for *three months* in the summer of each year—that is, from the 1st of May to the 31st of July; since, if the course of study is not to be regarded as a dead letter, a certificate of attendance for three months or longer, at *any other period* than the summer session of the second year, will not be receivable! We conceive that some explanation on this subject is required. The question involved is this: Is the course of study now issued by the Court to be considered as recommendatory or compulsory? It would, we believe, be satisfactory to all who are interested in medical education, to find that it is only intended to be recommendatory. It would be a proof of confidence in those institutions licensed by the Society to teach, which there is every reason to believe would not be abused. The University of London has, since its foundation, reposed this trust in the medical schools of Great Britain, and we believe that the University has had no occasion to regret the adoption of a plan of non-interference. From the high character of its graduates, it is obvious that a well-informed class of medical practitioners may be easily raised without reference to compulsory rules of education.

The Society has, we conceive, made one good step, in the abolition of a fixed number of lectures: it would make another, by announcing, like the Royal College of Surgeons of Edinburgh, that the printed course of study was *recommended*, and not absolutely enjoined. Medical students are not mere machines, and medical schools are now so well organised as to be able to lay down for themselves a reasonable plan of teaching. A third good step would be the abolition of the schedules, upon the signatures in which, taken as a whole, but little reliance can be placed. Let the Society examine well the plan of teaching pursued in a medical school; and if they feel satisfied with this, and with the professors or teachers who are to carry it out, let them be contented with receiving from one or more responsible officers of the institution, appointed by the professors or the Society, a special certificate that

e has gone through the
of study, and has or has
the approbation of his
hile this plan would be a
d and forgery, it would, by
number of signatures from
enty to one or two, place
power in institutions to
dustrious, to control the
d punish the idle and dis-
is a mistake to suppose
r twenty names attached
, with or without the word
can render it a more
estimonial than a simple
h as that above suggested.
ese schedules contain a
nes,—one teacher knowing
nother, or of the genuine-
gnatures attached to them.
herefore presents an ample
ud to those who are ill
r every subject in the
udy may be attended in a
ol! Those teachers who
isposed, and who do not
ies respecting the attend-
r pupils, of course do not
sign every schedule pre-
m. If, however, a con-
an decline to sign it, the
among certain unprincipled
t his name will be success-

Some time since one of
schedules was shewn to
all the names were genuine
These professors had de-
g because there had been
e: the difficulty had been
the forgery of their names:
res had been exactly copied
ther schedule! The pre-
adopted by the Society of
rtificates of attendance at
n our opinion most defec-
hile it encourages fraud,
tion, and a commercial
tificates, it affords no proof
at the *individual has really* attended the lectures:—it confounds the industrious with the idle student,—one who has earnestly and conscientiously devoted himself to the study of his profession, with another who has contented himself with a few months' grinding in order to baffle his examiners!

Reviews.

Clinical Collections and Observations in Surgery, made during an attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. Ormerod, F.R.C.S., late House-Surgeon at St. Bartholomew's Hospital. 8vo. pp. 312. London: Longman and Co. 1846.

The author states in his preface that the substance of his work was collected during an attendance of nine years at the above hospital: a period during which he appears not only to have availed himself fully of the ample opportunities for acquiring surgical knowledge which such an institution must always present, but also to have given employment to very superior powers of clinical observation. We cannot commend too strongly either the plan or the execution of the work in which the results of his investigations are conveyed; and, although by no means disposed, in general, to encourage the publication of extensive additions to our medical literature, we should be glad to find that many physicians and surgeons, who have long enjoyed the advantage of extensive experience, had availed themselves of the plan adopted by Mr. Ormerod in this work, viz. of placing together in a volume all the more novel facts and original observations which have occurred to them during their practice; arranging the materials under separate heads, but without attempting to form them into distinct and complete memoirs. We believe that, hitherto, many practitioners have felt unwilling to publish the more interesting results of their observation, from the isolated character of the facts which they have collected; while others, finding that they have become acquainted with several novel particulars concerning some pathological or physiological question, have perceived no other mode of giving their observations to the profession than that of making them the nuclei of a lengthy paper or elaborate volume, nine-tenths of which have probably been the result of a laborious and unnecessary task of compilation, which proves equally an infliction upon themselves and their readers. The work before us proves that much of this labour may be, in future, advantageously saved. A portion of the volume is occupied by a complete essay on "the comparative merits of mercury and iodine in the treatment of syphilis," but the remainder consists of a series of isolated observations upon a variety of important points in surgery and surgical anatomy. A considerable proportion of these contain reference to the clinical doctrines of the surgeons of the hospital, and descriptions of their modes of treating various diseases; but the results of the author's personal inquiries are by no means few; these are stated in a clear and unaffected manner; and although the style in which they are conveyed might, we think, admit of some improvement, the subject matter of the remarks is never wanting in practical interest.

The following are the principal subjects which are alluded to by Mr. Ormerod in the earlier chapters of his work:—Hernia; Fractures of the Ribs, Lower Jaw, and Pelvis; Injuries of the Bones of the Lower and Upper Extremities; Injuries of the Head and Spine; Bursal Tumors; On certain Circumstances influencing the Convalescence of Patients; (this is a very interesting and practical chapter, but although the leading facts and principles which it contains are evidently based upon the author's own observations, they are certainly by no means original); Affections of the Joints; Amputations; Affections of the Urinary and Genital Organs—of the Mouth and Trachea; Abscesses; and Malignant Disease.

As the observations arranged under these several heads appear in the form of separate and brief statements, we think that we shall best convey an idea of the subject matter by quoting a few of the paragraphs which have chiefly *attracted our notice. The following statistical remarks on hernia are interesting:—*

"Very few patients with strangulated hernia apply for relief at first to St. Bartholomew's Hospital, but the generality are attended by the medical practitioner in their neighbourhood, or even by two or three different persons. The proportion of patients operated on, as compared with those who are admitted, is thus large; yet many apply and have their ruptures reduced. The same patient often has his rupture reduced once or twice, or even three times; but it is more common for the second strangulation to need an operation than to be reduced by the taxis. Of those which are returned, the majority are cases of inguinal hernia, of moderate size, not long down, and not previously handled. The number of cases of femoral hernia returned is very much less than that of inguinal." * * *

"Within the last few years five patients have been admitted for strangulated hernia, who had been operated on previously; four again suffering strangulation in the same rupture, and one suffering from rupture on the opposite side. Of these five patients, the one having a hernia on the opposite side died from peritonitis; one of the patients with strangulation on the same side died from the omentum pressing the bowels high up; and the other three recovered, one being about 70, one 36, and the third about 35 years of age.

"In four of these cases the appearances were noted, in the whole of these the sac contained omentum, which, except in one of the cases where it was reducible, was allowed to remain."

It is probable that portions of omentum remaining in the sac, far from assisting in the subsequent cure, have great influence in favouring a re-descent of the intestine.

The author has collected a number of interesting facts illustrative of the various forms of omental hernia, together with several remarkable cases in which a corded portion of the omentum, passing down to a hernial sac where it was adherent, had produced fatal compression of portions of intestine within the abdominal cavity. He observes that—

"Amongst the number of patients in a large hospital, who have hernia in addition to their other ailments, it is very rare indeed to find one who, having been ruptured for many years, has been really cured. Many leave off the truss, and only suffer from the rupture occasionally; whilst others have a constant degree of hardness or swelling, the difference, perhaps, depending on the absence or presence of a portion of omentum.'

"When a patient with strangulated hernia is admitted, it is generally pretty clear, from the general features of the case, whether any delay can be allowed, as well as whether the taxis may be regularly applied. There is no doubt as little handling as possible is an excellent thing, if the patient has to be operated on; but reduction compared with an operation is such advantage, that it is generally tried. The taxis having been tried once, is a great inducement not to try it again. If it has been done once well, there is little to be gained by it; if it has been tried often, and in a forcible manner, it is not a very encouraging circumstance, or an inducement to repeat it. There are two classes of patients who admit of no delay, if the rupture does not seem likely to be reduced at once: patients with recent small ruptures, which are intensely painful when handled; old worn-out people, or middle-aged persons with old constitutions, who look very ill, have moderate-sized ruptures, and a white clammy tongue, with very few and often mild symptoms;—these persons, as soon as they have symptoms, often sink most rapidly."

The following observation deserves to be borne in mind as a caution:—

"In dissecting the bodies of old women, and especially those of very old persons, who have become bent up, so that the chin and pelvis are approximated, the ribs are often found quite thin and brittle, so that they break readily even in cleaning, and will not bear maceration. These ribs would probably break readily during life, but the persons so affected are generally bed-ridden, or so infirm as to move about very little, and consequently are not much exposed to accident. One of these wasted old women was admitted one day with a dislocated humerus, which was being reduced with the heel in the axilla by the house-surgeon, when a crack, like a rib breaking, sounded from the direction of the chest. The humerus was reduced, and nothing happened wrong in the chest; but there seemed to be little doubt that a rib had broken from the simple pressure of the foot.

The following observations may be new to many of our readers:—

"The urethra sometimes gives way after fever in a very remarkable manner. The following cases occurred at distant periods, but presented these peculiar features in common. Two men had been ill of low fever, in 1837 and 1844 respectively, but were recovering, when they were seized with swelling of the private parts," [*quære*, perineal abscess], "and evident effusion of urine. They both died. In one of these cases the urethra was examined, but no stricture was visible; there was an *opening in the membranous part of the urethra, with ragged dark margins*, which might possibly have included it. Again, in the autumn of 1846, a man was still remaining convalescent in the hospital after effusion of urine, which had occurred after fever, and had not been preceded by any severe stricture. Incisions had been freely made, and this man was nearly well." pp. 167-8.

"When a person cuts his throat, bleeding may be immediately fatal by suffocation. A man was brought in dead with a cut throat: the jugular vein was found divided, and a clot, by falling into the larynx, had choked him. Soon afterwards another man was admitted, with a very severe cut throat. Whilst the house-surgeon was clearing the coagula and tying the vessels, the man gasped, coughed, and seemed suffocated. The person assisting stuck his fingers immediately into the glottis, and pulled out a large coagulum which had tumbled into it. This relieved the man, and he lived for a day or two." p. 175.

"One evening a nurse ran in from the opposite ward across the passage, and called out that somebody was ill. The house-surgeon went directly, but the patient was dead immediately. A man with delirium tremens, and requiring restraint, had suddenly vomited, and, not being able to move readily, the substance from the stomach had gone into the trachea. The same accident may occur in another way:—A person has both thighs broken, and is to a certain degree fixed by the feet being fastened to the ends of the splints or bottom of the bed. If the patient suddenly wishes to vomit, he cannot turn, is taken unawares, and is at times suffocated directly. This accident has also happened when one leg only is confined." p. 178.

The above extracts will give a very fair idea of the succession of remarks of which the greater part of Mr. Ormerod's volume is made up. The concluding essay, on the treatment of syphilis by iodine and mercury, is a paper of great practical worth, and we doubt not affords a very correct idea of the plans upon which the various forms of syphilis are treated at St. Bartholomew's. We regret that we can only give space to the following extracts:—

"Simple general pains. In no form of disease is the employment of hydriodate of potash attended with greater benefit than in cases of dull aching pains in the long bones. In some cases marked relief is felt after a few doses of the medicine have been taken. In the majority, some improvement takes place in a few days, and the cases are very rare in which more or less benefit does not arise from it. In the more severe cases of this affection the patients are haggard and weary from pain and loss of rest; they rarely have any marked degree of fever, but often labour at the same time under affections of the throat and skin. The pains under which they labour are dull and constant, with occasionally attacks of severity, especially at night and on the occurrence of any damp weather. The painful parts present rather a degree of fulness than swelling, being covered with a thin layer of firm œdema; so that the naturally flat surfaces of the bones feel somewhat convex, and their sharp edges are blunted. This affection may be accompanied with hard and soft nodes, but often occurs without any affection of that kind. It sometimes happens that mercury, opium, hyoscyamus, and other means, successively fail in affording any decided relief to this affection, and the patient suffers severely until iodine is employed. The hydriodate of potash, in doses of from five to eight grains, administered three times in the day, acts often like a charm, and gives a greater degree of relief than any other means. This relief generally continues until the pains are more or less completely removed, and an increase of the dose beyond twelve or fifteen grains of the hydriodate of potash in the twenty-four hours is rarely required. When iodine fails to afford some earnest of future benefit soon after the commencement of its employment, it is not commonly found that any very great benefit follows its exhibition, either in large doses, or after a long continuance of its use." (pp. 263-4).

"With regard to the benefit derived from mercury in secondary affections, the following appears to be the general rule. The scaly eruption, the excavated ulcer of the tonsil, the syphilitic swelling of the testicle, the excavated ulcer of the tongue, the acute ulcers of the edges of the eyelids, iritis, the purulent discharge from the external auditory meatus, and some cases of pains in the limbs, require the employment of mercury in a decided manner. The greatest benefit in cases of papular eruption, unaccompanied with fever, in those forms of tubercular and pustular eruption which have a tendency to desquamate rather than to suppurate and form ulcers, and also in those cases where numerous small secondary ulcers occur on the body of persons not much reduced in health. The fissured tongue, and the syphilitic ulceration round the nail, are benefitted at times by mercury, but not always. The employment of mercurial fumigation in cases of pustular eruption, phagedænic ulcers of the skin, and foul sloughy ulceration of the pharynx, is attended *occasionally with the greatest benefit; but it is a hazardous means, and requires the closest watching.*"

We have been much interested by our perusal of Mr. Ormerod's collection of facts; we will not merely say that it is a work of great promise—it is more — it would do credit to any hospital surgeon of thirty years' experience. We strongly recommend its perusal to our practical readers.

A System of Surgery. By J. M. CHELIUS. Translated from the German, and accompanied with additional Notes and Observations, by JOHN F. SOUTH. Nos. X., XI., XII. London: Renshaw. 1846.

THE recently published fasciculi of the work containing the conjoined researches of Professors Chelius and South, are in every respect equal to the numbers which have preceded them, and are perhaps even more remarkable for the number and curiosity of the illustrative cases with which every page is replete. The following are the principal subjects discussed in the three numbers before us. Congenital and Accidental Cerebral Rupture; Prolapse; Inversion; Displacement of the Uterus; Prolapse of the Bladder. (A few interesting cases of inversion of the bladder, published in the last volume of the Provincial Medical Transactions, would have formed an appropriate addendum to this chapter.) Prolapse of the Rectum; Curvature of the Spine and Limbs; Aneurism; Varix (including Piles); Diseases dependent on Unnatural Coherence (including Anchylosis, Narrowing and Closure of the Rectum, Phimosis, Paraphimosis, and Urethral Stricture); Foreign Bodies in the Æsophagus, Stomach, and Intestinal Canal, Urethra, Larynx, and Trachea; Ranula; Retention of Urine; The Cæsarean Operation; Blood Swellings on the Heads of Infants; Dropsy of the Mucous Sacs and Serous Cavities.

The following extracts are all of practical value, and will prove new to the larger number of English medical readers:—

"Ulsamer mentions that he had observed prolapse of the womb to be in one village, as it were, endemic, in almost all the women who had borne one or two children; and when its cause was subsequently ascertained it was found that the midwife of the place, who had never been instructed, put all the women, as soon as they had the slightest labour pain, into the labour-chair, which was her only mode of assistance, and let them go on and strain till either the birth was effected or the women could go on no longer. This cause of prolapse," adds the commentator, "is not likely to occur in this country, the women being put in the recumbent posture instead of on the labour-chair; but the fact is worthy observation" (p. 108).

We are, however, inclined to think that in the above cases the prolapse was due as much, if not more, to the violent expulsive efforts which the patients were directed to maintain, as to the position adopted. Violent straining during labour is always liable to produce the most dangerous organic lesions.

The following is a plain, and we doubt not correct explanation of a cause which may produce high shoulder (*humerus elatus*) and lateral curvature of the spine in female children:—

"The most common cause of a high shoulder is to be found in the abominable practice of undressing girls' necks as low as the hanging of their clothes will permit. Instead of the shoulder-straps of their dress being, as they should be, fairly above the root of the acromial processes, they often—indeed most commonly—either only skirt the extreme end of those processes, and rest on the rounded upper part of the deltoid muscles, or are actually far down on the arms; in consequence of which, the dress having little or no suspension on the shoulders, is constantly dropping, and the girl, to save her clothes dropping down, or, at least, to keep them in place, is continually hitching up the shoulder from which the shoulder-strap most easily slips, and thus the elevating muscles becoming stronger on that side pull the shoulder permanently up, and produce a very ugly appearance. But the mischief does not stop here; for, though there really be no disease of the spine, yet this constant hitching up of the shoulder causes the head and neck to be thrown to the other side, whilst the chest is thrown out to the same side, and thus a lateral curvature of the spine is produced, and a girl's figure is spoiled, for the simple purpose of uncovering her neck and shoulders as far as possible, which, as well for decency as for the preservation of the child's health, ought to be covered. Many parents have been thus the real cause of their daughters' distortion, if not of more serious consequences; and, therefore, in growing girls who have the least disposition to slip their shoulder out of their dress, most especial care *should be taken to prevent the possibility of keeping up this habit, by* having the dress made so high that it cannot slip down, and then, the sensation of its slipping being lost, the child no longer continues to hitch up her shoulder, and by a little attention to her proper carriage, the mischief, if not of long standing, may be got rid of" (p. 159).

We have here another illustration of the numerous evils which arise from the adoption of unnatural and ridiculous styles of costume. We have been struck with the probability of the idea that it is principally to the general adoption of the above style of dress in children of both sexes that the deposition of tubercular matter in the apices of the lungs is due, and it is not improbable that the occurrence of caries of the upper portion of the dorsal spine is frequently determined by the same cause. Whether these opinions be correct or not, an anxiety to guard their offspring against the occurrence of strumous glandular and arthritic disease should be sufficient to determine parents to abandon the present injurious plan of clothing (or rather of stripping) their children. The mode now adopted can merely be regarded as an unjustifiable test of the constitutions of the little unfortunates, under which the few robust may survive, and the many delicate almost inevitably perish.

The historical notes on the treatment of external aneurism by pressure and ligature are remarkably elaborate and interesting. The following remarks on the application of ligatures in such a manner as not to produce division of the inner and middle tunics deserve quotation, as the propriety of reviving this very questionable plan has recently been mooted.

"I do not believe it needful to draw the silk so exceedingly tight as commonly recommended, for the purpose, as it is said, of cutting through the internal coat; it should be drawn so much that the whole of the internal coat be brought into close contact, and that the silk should indent the external coat of the vessel: in other words, the ligature should be tied moderately tight. I do not believe that cutting through the internal coat is absolutely necessary for the safe application of a ligature. A thread applied around the carotid artery of a dog so loose as not to interfere with the passage of the blood, is sufficient to cause inflammation, which will block it up completely, as was proved by an experiment made by my able master, the younger Cline, and which I myself have repeated with the like result.

In the museum of St. Thomas's Hospital there are two preparations, in which the femoral artery was tied with a broad tape and [the tape] removed after some hours by the elder Cline, in cases of popliteal aneurism. In one case, the artery being laid bare, a double tape, about an inch broad, and one piece lying on the other, was passed by means of an instrument behind the artery. The piece of tin which conducted the tape was cut off, and a cork nearly an inch long was laid upon the artery, and confined to its situation by means of the upper tape, producing, in this way, a sufficient pressure upon the vessel included between the ligature and cork to stop the circulation, was left loose. The intention of securing the artery in this way was to compress the sides of the vessel together, and produce union without ulceration. On the ninth day the tapes were removed, and everything seemed to be going on very favourably, when the patient was attacked by a fever, supposed to have been caught from another patient in the same ward, of which he died on the seventeenth day after the operation. On examination of the limb after death it was found that ulceration had taken place through the whole extent of the artery included in the tape, and sinuses were formed both upwards and downwards in the course of the thigh to some distance. In the other case, similarly treated, the operation was successful, but the patient died, three months after, of diseased lungs. Both these preparations are in the museum of St. Thomas's Hospital.

"Crampton (now Sir Philip) of Dublin, holding that the division of the internal and middle coats is precisely the kind of injury which a diseased artery is least able to bear with impunity; and that 'accordingly, secondary hæmorrhage, or even aneurism, is not an unfrequent consequence of this operation,' adopted a modification of Cline's use of a temporary ligature. 'The femoral artery was laid bare, at the usual place, by an incision not exceeding three inches in length, and a tape one-eighth of an inch in breadth was passed under it by means of an aneurism needle. The ends of the ligature were passed through the holes in the foot of the *presse-artère*, and then crossed through the hole in its stalk. The artery was gently compressed by drawing the two ends of the ligature in an opposite direction, until the pulsation had ceased. The ligature was then secured by passing a small peg of wood through the hole in its stalk.' Soon after the patient had excruciating pain in the calf of his leg, and this continuing, at the end of two hours Crampton 'determined to relax the ligature, as well to ascertain how far the pain was excited by its presence, as to observe what progress had been made in the process of coagulation; the peg was withdrawn from the hole in the stalk of the instrument, and the ligature was thus left at liberty to yield to any impulse that it might receive from the artery. I watched for five minutes with my hand upon the tumor, and, as the pulsation did not recur, the peg was replaced, so as to secure the ligature at the degree of tension it now possessed.' After forty-four hours the ligature was completely relaxed; there was no pulsation in the ham; and, on the following day, it was removed, and the patient cured. Dease, of Dublin, also performed the same operation, and lo sened the ligature five hours after; but a minute after, 'a deep and obscure pulsation was discerned in the tumor, which became more distinct every moment.' The ligature was immediately tightened, and the pulsation ceased. Nineteen hours after, 'the ligature was again completely loosened: we waited with great anxiety for nearly an hour, but the pulsation returned no more.' The patient recovered. Crampton's instrument consists of a short cylinder, having a foot at bottom, pierced on either side with a hole for the tape, which having been passed through a transverse hole near the top of the cylinder, where they are crossed and tied, a little screw works down upon this tie, by which the ligature can be tightened" (p. 222).

The first of Mr. Cline's cases related above proves that the compression of the artery by means of a broad ligature is no safeguard against ulceration of the vessel, and the pain suffered by Sir P. Crampton's patient indicated a circumstance which would in a large proportion of cases render an operation of this kind dangerous if not impracticable. The branches of the saphenous nerve are not frequently so intimately attached to the femoral artery as they probably were in this case, but we have known great pain occasioned at the moment of placing a ligature around the vessel; and the pressure of a broad fold of linen, or a *presse-artère*, must always tend to render the surrounding suppuration and inflammation far greater than would usually result from the presence of a small round ligature. And where important nerves lay in the close vicinity of the vessel, as in the case of the primitive carotid, innominata, and subclavian, the use of such an apparatus could not be contemplated for an instant.

In the remarks on "Unnatural Adherence of the Tongue," the observation that in many cases the inability o hildren to suck from their mother nd wet-nurse is ascribed to the tying f the tongue, whilst it really depends n other causes. Congenital shortness f the *frænum linguæ* is by no means a ery common malformation, but hundreds of mothers insist upon receiving urgical aid for the removal of an imagined imperfection of this kind in their infants, and it often becomes a rather nice question how the surgeon should act upon such occasions. The best mode of examining the state of the parts is to brush the fingers a few times across the upper or lower lip of the infant: this will, at once, cause the child to endeavour to apply the tip of its tongue to the lip; and, should this attempt be successful, it will be evidence that the frænum is of due length. It is perhaps best to make the slightest possible scratch in the mucous membrane in all these cases, as, unless the mothers are convinced that an operation has been performed, they will probably have recourse to some unqualified person unacquainted with the danger of dividing the ranine artery.

We are rather surprised at meeting with the following remark, in the section on Stricture of the Rectum.

> "Are strictures of the rectum ever situated higher up [beyond the reach of the finger.] I saw one case where stricture of the rectum was about six inches above the anus, and I saw another where there was stricture in the sygmoid flexure of the colon, and manifestly the consequence of a contracted cicatrix of an ulcer which had formerly existed at this part. Every now and then, also, I have heard from medical practitioners of my acquaintance of a stricture of the upper portion of the rectum, or of the sygmoid flexure of the colon, having been discovered after death. *Such cases, however, you may be assured are of very rare occurrence.*" (p. 336.)

We have certainly not been in the habit of considering malignant stricture of the lower bowel, nearly at the spot where it passes the brim of the true pelvis, as a very unusual lesion. Three well-marked instances of the kind have occurred within our own observation during the last ten years, and we have heard of four or five others. The patients usually die of insuperable constipation, but in one case which we watched and examined after death, *a communication occurred between the bowel and the urinary* bladder. Another similar instance is related by Mr. Hingatestone in the Guy's Hospital Reports. These were evidently cases of malignant stricture of the lower portion of the sygmoid flexure, where the distension above had caused adhesion of the diseased portion to neighbouring parts, and consequent ulceration. In all cases of this description the introduction of instruments for the purpose of producing dilatation is of course a most useless and dangerous proceeding.

The following is a stern caution with regard to the necessity of care in attempting to perform the Cæsarean operation in cases where it is supposed that the woman has just expired.

> "A medical friend, on whose veracity I can rely, told me of an instance in which a practitioner in the country, presuming that a pregnant woman labouring under typhus fever was dead, began the performance of the Cæsarean operation, the pain of which arousing her from her death-like state, she screamed out, and soon died. He lost his practice, and was obliged to leave the place." (p. 437.)

We believe that the following rare cases have not hitherto been alluded to in any of our medical periodicals.

> "Begin* gives an account of an *aneurism of the middle meningeal artery*, in which the bone having been absorbed, the tumor became superficial, and, being mistaken for an encysted tumor, was extirpated. An ineffectual attempt was made to stop the bleeding by plugging; but the patient could not be saved." (p. 240.)
>
> "Möbus† mentions a case of aneurism of the vertebral artery, originating in wound, which was cured by compression, the application of ice, &c.
>
> "An example of this very rare disease (*aneurism of the vertebral artery*), has recently occurred in the Northern Infirmary at Liverpool; the carotid artery could be distinctly traced over the pulsating swelling, of the actual nature of which there were some doubts—as to what kind of aneurism it was, or whether only a pulsating tumor. It was decided to tie the carotid artery. The tumor rapidly increased after the operation, and in about a fortnight the patient died by bursting of the aneurism into the trachea. On *examination*, an aneurism of the vertebral artery between the transverse processes of the fourth and fifth cervical vertebræ was found." (p. 250.)

---

* Dict. de Médecine et de Chirurgie pratiques. Vol. ii. p. 533—article, *Anévrysme*.

† Von Graefe und von Walther's Jour. vol. xiv. p. 98.

"The *aorta* was tied by C. D. Monteiro,* at Rio Janeiro, Aug. 5th, 1842, for an aneurism of the femoral artery close to the groin, which on examination turned out to be spurious, by the vessel having burst and formed a large swelling, occupying a great portion of the right under part of the belly. The incision was made on the left side, from the tip of the last false rib to the upper front iliac spine, through the abdominal walls, avoiding the peritoneum. The fingers were then carried down to the aorta, and a ligature with great difficulty passed around it by means of a ligature-needle. But little blood was lost. As soon as the ligature was tied the aneurism sunk down, but the artery swelled up, and for some time remained as a thick large knot. The case went on well till the *eighth* day; at 3 P. M. arterial blood escaped through the dressings; it did not, however, affect the pulse, but the patient's countenance was sunken and hollow. The bleeding continued, and on the *tenth* day, at 10 A. M., he died. The ligature had been placed two lines above the bifurcation of the aorta; a small opening was found on the left side of the vessel, immediately above the ligature." (p. 255.)

"I have seen one case of callous (œsophageal) stricture, in a man sixty-three years old, in which there was a communication between the right bronchus and œsophagus. Meyer relates an instance of strictured œsophagus with a communication between the left bronchus and œsophagus. Gendrin communicates two cases of narrowing of the œsophagus at the region of the cricoid cartilage, in which there was also a fistulous orifice into the trachea, and cough in swallowing, vomiting of fluids, speaking through the nose in consequence of the changed direction given to the air." (p. 320.)

CAOUTCHOUC GLOVES, FOR DISSECTING PURPOSES.

At a late meeting of the Medical Society of Emulation in Paris, M. Blatin produced a pair of gloves formed of sheet caoutchouc. They were thin, supple, and firm. When on the hands, the pulsation of the arteries could still be plainly felt, and they did not interfere with the use of delicate instruments where the sense of touch was required. M. Blatin considers that they will be highly serviceable to medical practitioners in examining patients affected with contagious diseases, in conducting *post-mortem* inspections, or in dissecting, as they will tend to render less dangerous the slight punctures produced by the scalpel; they may also, in some cases, be found useful in chemical manipulation.—*Gaz. des Hôpitaux.*

Medical Trials and Inquests.

CHARGE PREFERRED BY A PHYSICIAN AGAINST A SURGEON FOR MALAPRAXIS IN A CASE OF STRANGULATED HERNIA.

We have lately received a pamphlet* containing the details of a very singular judicial inquiry which occurred some time since in Van Dieman's Land. Although the period which has elapsed since the termination of this affair is somewhat long, we believe that its details will prove sufficiently new to nearly the whole of our readers to justify us in presenting them with an abstract of the case.

Supreme Court, Friday, Jan. 6th, 1843.

[Before his Honour Sir John Lewis Pedder, Knight, Chief Justice, and a Special Jury.]

Pugh v. *Haygarth.*

This was an action for malicious prosecution. The damages were laid at £1000.

The plaintiff's counsel stated that the declaration alleged, in the usual terms, that until the commission by defendant of the certain grievances therein named, the plaintiff was of good fame, &c., and that he had never been guilty, or suspected of being guilty, of the charges preferred against him by the defendant; and that he (Dr. Haygarth, the defendant) falsely and maliciously accused Dr. Pugh of the crime of manslaughter. On the 22d of August Dr. Haygarth laid an information against Dr. Pugh at the police-office, and without any reasonable or justifiable grounds accused him of having caused the death of the late Mr. Williams, — a previous part of the declaration alleged that Dr. Pugh performed a surgical operation upon the late Mr. Williams; and the substance of Dr. Haygarth's accusation was, that in so performing the said operation, his client had treated the deceased gentleman with gross negligence, ignorance, and rashness, thereby occasioning his death. In this manner defendant caused a summons to be issued against Dr. Pugh, who attended in consequence to answer the charge at the police-office: the magistrates, having heard the charge, adjudged that Dr. Pugh was not guilty thereof, whereupon he was acquitted. Defendant had not further prosecuted the said charge, and it was fully ended and determined. The defendant had pleaded the general issue, which asserted, in substance, that he had not been guilty of the allegations contained in the declaration. It further appeared that it was not until six or seven months after the death of Mr. Williams (the subject of the alleged malpraxis) that the defendant arrived as a perfect stranger at the colony. He arrived in June, and in the month of August following proceeded to the police-office, and there laid the charge against the plaintiff.

---

* *From a letter of* Lallement's, in Schmidt's *Jahrbücher der in* und ausländischen gesammten *Medecin. Leipzig*, 1843.

* A Letter to the Medical Profession of Van Dieman's Land: accompanied by the Particulars of an Operation for Strangulated Congenital Hernia, &c. &c. By W. R. Pugh, M.D. Launceston, V.D.L. 1843.

The magistrate before whom the charge against Dr. Pugh was preferred stated that Dr. Haygarth's manner to the bench and witnesses was very improper; he thought it imported malignant feelings against Dr. Pugh, and the other medical gentlemen, excepting Drs. Doughty and De Dassell, his own witnesses.

The information was then read.

"The information and complaint of Burton George Haygarth, who deposeth and saith:—I am a doctor of medicine; it has become known to me that a death occurred some time since in the town of Launceston under very questionable circumstances: there are circumstances of a very questionable character connected with the death of Thomas Williams, of Launceston, merchant. My information respecting these circumstances I derived from the medical attendant of the family, Dr. De Dassell, of Launceston, and from Mr. Surgeon Doughty, who was called in to inspect the body. I allege that due and suitable professional measures were not adopted, and were neglected to be used, in order to the surgical relief of the said Thomas Williams, by the party under whose professional charge he was at the time of his decease, and had been previously thereto. This party was Mr. Pugh, of Launceston, surgeon. I have been informed that, for the relief of the said Thomas Williams, a surgical operation was deemed necessary; which operation was inadequately performed, *to the extent of a culpable failure, for the relief of the said Thomas Williams: and that culpable and ignorant neglect in not renewing other, or similar medico-chirurgical means, for the relief of the disease, characterised the mode in which the case was conducted, until the death of the said Thomas Williams took place: which death was due, so far as human probability can discern, to the culpable neglect of the professional measures which belong to the case in question*. The said Dr. Pugh was, I allege, acting surgically in the operation which he performed upon Thomas Williams, and treated the said Thomas Williams with gross negligence, ignorance, and rashness, and thereby occasioned his death."

"(Signed) B. G. HAYGARTH, M.D. &c."

[It appeared that the *words marked in italics were in the handwriting of Dr.* Haygarth; but he demurred to the last part, imputing gross ignorance, rashness, and negligence to plaintiff until informed by the magistrate that, as it would probably be found necessary to issue a warrant against Dr. Pugh, this could not be done upon slight grounds, it was necessary to have a clear and distinct charge in the information. The whole of the information was read over to defendant before he signed it.]

Dr. De Dassell was then called, but did not come forward; as, however, this gentleman's statements appear to have great importance in the case, we shall give a few extracts from the evidence which he gave at the police investigation:—

I am a doctor of medicine, and was medical attendant to the late Mr. Williams at the time of his death. I was in attendance on him at the time he was taken ill: I was sent for at four o'clock in the morning. I found that the nature of his complaint required that I should send for other medical men; I sent for Messrs. Benson, Salmon, Pugh, and Gaunt: they came. I was present when an operation was performed on Mr. Williams by Dr. Pugh: the other medical gentlemen whom I have mentioned were also present the whole time. * * * I have witnessed many operations of a similar kind before; the means usually adopted for the relief of the patient were used by Dr. Pugh: no observation was made during the operation, in my hearing, to the effect that it was not properly performed. The usual medicines were ordered after the operation. I did not tell Dr. Haygarth that it was in consequence of there being no further surgical assistance called in that the patient died. I recollect Dr. Gaunt asking Mr. Pugh, when he was finishing the operation, if the intestine was returned, and Mr. Pugh replied it was. I was present at the *post-mortem* examination. I had some conversation with Dr. Haygarth on the subject of the *post-mortem* examination; I told Dr. Haygarth that Mr. Pugh opened the sutures and took out a tumor, which, in my opinion, was operated on before, cutting and dividing it, and showing in the intestine a septum, which had formed there in consequence of adhesive inflammation. Some other conversation took place on the matter. In my conversation with Dr. H. I only described to him what had taken place at the operation and at the *post-mortem* examination: I did not in any way induce Dr. Haygarth to bring the matter before the police. I had a conversation about a fortnight ago with Mrs. Williams respecting the propriety of an investigation; she said that she did not wish it. I am of opinion that Dr. Pugh performed that operation with great care and an unusual degree of delicacy. I am of opinion that Mr. Pugh betrayed no want of skill or knowledge in performing the operation; I have no reason to believe from what I observed during the operation, or at the *post-mortem* examination, that the death of Mr. Williams was occasioned by any mal-practice on the part of Dr. Pugh, neither do I believe that his death was occasioned by Mr. Pugh having neglected to do anything in the operation which he ought to have done; I am of opinion that the death of Mr. W. was occasioned by the symptoms of strangulated hernia; I am of opinion that nothing could have been done more or better than what was done in Mr. Williams' case. The witness then proceeded to state the circumstances of deceased's case. When he was first called to attend Mr. Williams he found him labouring under griping pains, which he attributed to having taken sauterne, cucumber, and cheese. In an hour or two afterwards, witness proposed to examine the abdomen, and on examination discovered that there was an inguinal hernia on the right side; he subsequently learned from him that he had for some time previously been troubled with inguinal hernia. [Dr. D. afterwards stated that deceased had been the subject of hernia from his infancy.] Witness attempted to reduce the hernia, but without success; the taxis, warm-bath, tartarized antimony, and bleeding to fainting in the upright position, were subsequently employed by Dr. Benson, Dr. Gaunt, and witness. Mr. Pugh was called in in the afternoon. Mr. Salmon arrived a few minutes previous to the operation. Mr. Williams stated that he wished Mr. Pugh to perform the operation. Recollects that Mr. W. suffered from all the usual symptoms of strangulated hernia; assisted Mr. Pugh and the other surgeons in the operation. Was not aware of the seat of the stricture, but supposed there was a difficulty in dividing the internal ring; the distance between the external and internal ring was about two inches. Witness thought he recollected Mr. Salmon putting his finger-nail under a certain band, which surrounded the neck of the tumor, in order that the knife might be introduced; it was after the hernial sac had been opened, and the usual obstructions to the return of the hernia divided, that this band was discovered; after the division of this band the tumor, which witness could see before, disappeared; recollected Dr. Pugh saying that he had passed his finger along the canal, into the abdomen, and recollected Dr. Gaunt saying that he had done the same. Also remembered Mr. Williams making an observation that the pain he then suffered was tolerable in comparison to what he had been suffering before. Mr. W. shortly after the operation took some gruel, which was retained on the stomach; for some three or four hours previous to the operation all food and medicine was rejected from the stomach: during the night after the operation Mr. W. slept at intervals. In consequence of the relief of the bowels, and exhausted state of Mr. W., it was considered advisable to delay the administration of aperient medicines for a few hours. In the course of the following day (Wednesday) aperient medicines and enemata were employed; the medicines were retained on the stomach until the evening; about eleven o'clock at night irritation of the stomach again commenced. The subsequent treatment of Mr. W. was the result of consultations between Messrs. Pugh, Gaunt, and Benson, and witness sometimes joined them. The intestine at the operation was not of its natural colour, it was of a chocolate colour, and in witness's opinion darker at the *post-mortem* examination. Thinks that when Dr. Pugh reduced the intestine it contained flatus; at the *post-mortem* examination the intestine was not distended with wind, nor did it contain anything as at the time of the operation, but was agglutinated together: cannot say how the air contained in the intestines had been removed; suppose it must have got out; in witness's opinion the operation alllowed the air to escape. Had stated that the operation was a splendid one, and again repeated it; thought that the intestine, mentioned to have been taken out by Mr. Pugh, was taken out of the abdomen, (the witness was evidently unable to state whether the portion of ilium which had been protruded was found at the *post-mortem* examination within the abdomen, or in the inguinal canal); could not tell whether the patient died of unrelieved incarcerated hernia, subsequent to the first operation: any other surgeon could have relieved it by another operation. There was no passage, so far as he knew, through the bowels, subsequent to the operation: there was a vomiting subsequent to the operation, it ceased for a time, came on again, and left off two days previous to the death of Mr. W.; these symptoms are not those which ought to be expected after a successful operation for hernia; in strangulated hernia you may have want of passage and vomiting; but if the strangulation is relieved it was witness's professional opinion that want of passage may continue; absence of tone to the bowels may be a cause of want of passage; witness might have expressed to Dr. Haygarth, or some one else, that there was something wrong in Mr. W.'s case, in his opinion—did not recollect having done so; did not recollect expressing to any one that after the operation the intestine was not returned; could not recollect whether he was in a position to see that the usual obstrucns to the return of the hernia were di- ed.

Matthias Gaunt, surgeon, gave evidence t he visited the deceased professionally the occasion of his fatal illness: he died the Sunday following. Witness then ted the early symptoms observed in Mr. 's case, and the plans adopted for reduc- the hernia previous to the operation. intiff performed the operation because medical men in attendance deemed him st competent to do so. The operator t with considerable obstruction in return- the protrusion into the abdomen; it was imately removed, and the protruding part ommitted to the abdomen. An almost mediate cessation from pain ensued; the kness was relieved, and to a great extent those symptoms of anxiety and distress ich had been manifested before. Should the whole of the unfavourable symptoms re relieved with the exception of consti- ion. Should say the plaintiff operated y adroitly, and for a person who has had few opportunities of performing such an ration, with great self-command, and he ght say dexterity. Between the operation l the death of Mr. W. witness once saw part where it had been performed; ld speak distinctly to once, when the ndages became loose. There was no nor, and the wound had a most favoura- appearance. Witness attributed his ath to constipation in consequence of a rtion of the gut becoming paralysed, and by the passage through the gut having come impeded by the formation of mem- nous bands. All the gentlemen present the performance of the operation were at post-mortem examination; Mr. Doughty l several other parties were present. itness took notice of the part where the eration had been performed; the wound s healed in the most kindly manner; there s not the slightest appearance of a tumor, r any unusual discolouration. Upon the lomen being opened, the general ap- rance of the viscera was healthy; there s a small knuckle of intestine, which was a dark chocolate colour, evidently the rt which had been constricted, bound ether by rather an acute angle, and also hering to the sac and the internal abdo- nal ring; but, upon this portion of the estines being cut away, an obstruction by mbranous bands in the gut itself was dis- vered. * * * It is not likely the gut uld return after death; it certainly could t return to the place where I saw the mor. The paralysed gut was not in a ite of mortification: there may be cases ere it is necessary to cut off a portion of gut before returning it to the abdo- n (!): the gut was highly discoloured, and in a congested state; but no medical man would have been justified in cutting away that portion of it. It is not usual for people to die from an operation for hernia.

W. Benson, Esq. is a surgeon: was present at the operation: it was very carefully and very skilfully performed. Attended the *post-mortem*. Before the operation there was a tumor on the right groin about the size of a pullet's egg; did not observe any thing of the kind at the *post-mortem*; do not think there could have been any thing of the kind without my seeing it; there was no tumor visible.

J. Grant, Esq. surgeon, attended the *post-mortem* examination; examined closely the part which had been operated upon; saw no tumor; there could not have been any there without my observing it; in my opinion Mr. W.'s death was caused by the strangulated part having received so much injury as not to resume its functions: the injury was occasioned by strangulation; it was the character of the disease, and did not depend upon the performance of the operation. There was no observation made respecting a tumor or protrusion by any person present; should say the operation had been successfully performed.

The Counsel for the defendant argued, that if defendant had reasonable grounds for suspicion, though no actual proof could be adduced, even though the contrary might have been proved, the jury would agree that he not only was doing no wrong, but was performing a bounden and indispensable duty, incumbent upon him as a medical practitioner and a private member of the community, in preferring a criminal charge against the prosecutor. Defendant came to the colony a perfect stranger, unbiassed by local or personal prejudices, and what grounds were there for imputing malicious motives? Nothing had been advanced from which the existence of malice could even be inferred. The facts were these. His client had been invited to a medical *soirée* at the house of Dr. Doughty; during the course of the evening the conversation turned upon medical subjects, and it was there stated that Mr. Williams had come to his death by the maltreatment of the plaintiff. These statements were made by Dr. De Dassell, the medical attendant of the family, and others confirmatory thereof were given by Dr. Doughty, who attended the *post-mortem*. His client, in the natural language of one jealous of the honour of the profession, &c. immediately expressed his surprise that no investigation had taken place. Careless whom he might offend, and in the height of his indignation—even for a while forgetting the common rules of courtesy—he upbraided those present with a want of manliness in not having at once gone forward to substantiate so serious a charge. The learned counsel then stated the defendant's subsequent proceedings, and argued that the course which he adopted was a legitimate one, for forcing from Drs. De Dassell and Doughty the truth or falsehood of their statements. If defendant had been imposed upon by corrupt motives, and for corrupt purposes, he was still scatheless from this action, and deserved the protection of the verdict, should the jury be of opinion that he was only performing a conscientious duty in causing the matter to be investigated. The whole of his information amounted to this—" I have been informed of these things, they are of great importance, I solicit an inquiry into them."

John Doughty, Esq. examined.—I am a surgeon. I stated to Dr. Haygarth that I was present at the *post-mortem*, and that immediately the sheet was removed I saw an elevation or tumor on the part where the operation had been performed. It occurred to me immediately that the operation had been improperly performed: I thought at the time the intestine had not been returned to the abdomen. I told Dr. Haygarth I was of opinion the hernia had not been properly reduced. In some cases the hernia cannot be returned. I made that statement in the presence of the gentlemen I have mentioned. I did not then state what was the probable cause of Mr. W.'s death. I stated that, from what I knew myself, and what I had heard, the operation had not been properly performed. Dr. Haygarth said it was a lamentable circumstance, and one that ought to be investigated. I imputed to Dr. Pugh personally maltreatment in that case, and should have spoken in the room had I been called in as a medical gentleman: I believe I was sent for by Dr. Pugh. I asked him how the gut was in the inguinal canal at the *post-mortem* examination, and how it happened Mr. W. died under all the circumstances of strangulated hernia: he said it was owing to a septum having formed. He alluded to a case that had occurred in the hospital in a kind of retaliation. I gave plaintiff to understand that, in my opinion, Mr. W. had not been properly operated upon, and he retaliated by mentioning a case at the hospital. I told him that I had nothing to do with that case. This was a day or two after the *post-mortem*.

In his evidence at the trial Mr. Doughty does not appear to have alluded to the condition in which he found the *interior* of the hernial sac at the *post-mortem* examination. The following extracts from his statement at the police-office will supply the deficiencies of the above account. "The tumor which I saw was external; when sutures were cut* there was a dark-coloured tumor, which was a nut of the intestine; this tumor was external to the cavity of the abdomen; it came to view at once on the sutures being divided where the operation had been performed; the intestine might have been returned within two hours before the death of Mr. Williams." . . . "I observed the state of the intestines, and there were adhesions external to the cavity of the abdomen; these adhesions were subsequent to the strangulation, because there must have been a very considerable inflammation existing to produce this adhesion."

We shall conclude this detail with two extracts from documents which were furnished by surgeons who attended the inspection: the first is from the certificate of surgeon Grant (p. 24).

"The incision had healed by the first intention. There was no discolouration of the skin around this" (the external) "wound, and not the slightest swelling or tumor of any kind. The abdomen was opened, and the general appearance of the viscera was healthy; the peritoneum presented no marks of recent inflammation either where it invests the bowels, or where it spreads over the parietes of the abdomen. The piece of intestine which had been strangulated was seen at the internal ring; it was a small portion of ileum, and a considerable portion of that bowel above and below the diseased portion, together with its thickened and contracted mesentery, were firmly connected with the peritoneal lining membrane in the neighbourhood, and sufficiently explained the cause of the frequent attacks of constipation and griping pains to which Mr. Williams had been subject for a long period of his life. The small discoloured portion of intestine was doubled back on itself, and had been permanently kept in that position by transverse bands of long standing; it was slightly adhering to the sac at one side of the margin of the ring, and a small portion had dropped into the open pouch, and was lying at the orifice of the inguinal canal, quite flaccid, and not embraced by the neck of the sac. The recent inflammation of the bowel had been confined solely to the part which had suffered strangulation, the dark red hue of the one contrasting strongly with the healthy and natural appearance of the other. When this diseased knuckle of intestine was slit open, it was apparent that the mucous and muscular coats, as well as the serous covering, had been the seat of inflammation, the former having thrown out bands of coagulating lymph ide of the bowel; these mem- uite firm in their texture, and ht the slightest appearance of am quite positive that no internal tumor existed; the ccid state of the diseased in- ly prevented the possibility of rence."

---

* Dr. Pugh states, in a note to this passage, that the sutures were removed three days prior to Mr. Williams's decease.

account (p. 29) is by Mr. nial Assistant-Surgeon.

, in the neighbourhood of the of its natural colour. Some re removed by Dr. Pugh, and reopened: no intestine was at the external ring or in the l. The cavity of the abdomen open, and a small knuckle of hocolate colour, was seen ad- edge of the internal ring; this ntestine was empty, and lying opening of the dilated canal. of gut which had been stran- ed an angle, and the serous s placed in apposition, were nt. On opening this part of , its calibre was found to be shed by bands stretching from the mucous membrane to the

rought in a verdict for plaintiff, 50.

states in this pamphlet, that ant in this action, after twelve prisonment in Her Majesty's bart Town, was liberated under t law."

s.—We have given the above fully, that our readers may have rtunity to form their own con- on the moral as well as the rings of this extraordinary case. o be compelled to state that the impressed us with a very un- npression of the evidence given e witnesses for the defence, Dr. So contrary was that individual's ith regard to the condition of the ion, and of the hernial sac, from s given by other surgeons who t at the examination, and whose are given with a minuteness and afford the strongest evidence of cy, that we cannot resist the hat the detail of the post-mortem given by this witness—the only case, it must be remembered, he was capable of speaking from vation—was absolutely, we would or the honour of the profession, ionally, erroneous. Strongly we do that the operation was ith the requisite amount of skill, protruded *intestine was re*turned from the sac into the abdominal cavity, and that the subsequent insuperable constipation and other fatal symptoms depended, not upon the re-descent and strangulation of the intestine, but upon the inflamed condition of the bowel consequent upon the pressure which it received previously to the operation, together with its folded condition and its close adhesions to a portion of the neck of the sac within the abdomen, we are compelled to maintain that the sentiments expressed by Dr. Doughty with regard to the nature of an operation which he did not witness, and the character of morbid appearances which he did not understand, were, to say the least, rash and injudicious in the extreme. With regard to the ill-advised individual whose presumption and weakness appear to have alike hurried him to the adoption of a step which, when once taken, left only the alternative of irrevocable ruin to his own prospects, or to those of a brother practitioner who was the object of his charges, we have scarcely one word to say. If the motives of that individual were in reality good, the consciousness of his error, and the weight of his disgrace, must, we apprehend, fill him with regret; if his intentions were otherwise, the just severity of the law, and the fiat of society, must ere this have rendered his punishment sufficiently weighty.]

CENTRAL CRIMINAL COURT.

Saturday, Sept. 26.

RAPE ON AN IDIOT.—REG. *v.* RYAN.

Rape committed upon the person of an idiot. A question was asked by B. Platt of the girl's father as to her general habits and character, with the view of eliciting the probability or improbability of her having been a consenting party. Where a girl is in a state of utter unconsciousness, whether occasioned by the act of the prisoner, or otherwise, a person having connection with her during that time is guilty of a rape.

THE prisoner was indicted for rape. The prosecutrix was an idiot, and when asked questions in the witness-box, was evidently unconscious of their purport, and not in a condition to understand right from wrong. Platt, B. interrogated her father as to her general habits, whether they were those of decency and propriety, and an answer in the affirmative was returned.

PLATT, B. in summing up.—The question is, did the connection take place with her consent? It seems that she was in a condition incapable of judging, and it is important to consider whether a young person, in such a state of incapacity, was likely to consent to the embraces of this man; because if her habits, however irresponsible she might be, were loose and indecent, there might be a probability of such consent being given, and a jury might not think it safe to conclude that she was not a willing party. But here the presumption is, that the young woman would not have consented; and if she was in a state of unconsciousness at the time the connection took place, whether it was produced by any act of the prisoner, or by any act of her own, any one having connection with her would be guilty of rape. If you believe that she was in a state of unconsciousness, the law assumes that the connection took place without her consent, and the prisoner is guilty of the crime charged. The prisoner was convicted."—*Law Times.*

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

Mr. Dendy, President.

Monday, October 5th.

DISCUSSION ON HOMŒOPATHY.—HONESTY OF HOMŒOPATHISTS.

The discussion on Dr. Willshire's paper was resumed.

Dr. Leonard Stewart made some remarks on the treatment of disease on what was called the "do-nothing plan," chiefly with the view of showing that patients, even by this practice, were placed in circumstances likely to arrest the progress of the disease; as, for instance, in pneumonia they were kept from cold and damp, &c.

Dr. Risdon Bennett said that in this discussion, a main question might be fairly this—Were remedies of any avail in the treatment of disease? Now pneumonia being a disease easily detectible, might be fairly taken as a test to this question. Many cases of slight pneumonia might doubtless occur, in which, if the patients were placed under favourable circumstances, recovery might take place without the aid of medicines. These were the cases recorded as cured by homœopathic treatment; the homœopathic medicines having, in reality, no kind of effect. Cases of pneumonia, however, occasionally presented themselves to the practitioner of legitimate medicine, which had been neglected, and had been subjected to no active treatment. He had seen gangrene of the lung from this cause. If active legitimate remedies had been employed, it is not probable that such disorganization would have taken place. With respect to the statistical reports of the homœopathists, he could unhesitatingly affirm, that the greater number of their cases were not worth a straw, in consequence of errors in diagnosis.

Mr. Barlow observed, that it would, indeed, be astonishing, if, after centuries of inquiry and experience, it was all a mistake to suppose that medicines possessed any efficacy. He proceeded to illustrate the value of legitimate practice, by referring to the influence of bloodletting in acute cases of inflammation. He would ask any member of that Society, whether, if afflicted with pleuritis, or any similar acute inflammation, he would trust to homœopathic treatment for his cure? He was convinced that no one of them would. He considered, that if there was any fault with regard to medicine, it was that we paid too much attention to its general, and too little to its special effects. It must not be forgotten, that if the physician lost faith in physic, the public would lose faith in the physician. He proceeded to explain the views of Louis in respect to the treatment of pneumonia.

Mr. Alder Fisher believed that a serious source of fallacy existed with respect to statistics, inasmuch as they were founded on general rules of practice, and not on the special application of remedies to each individual case.

Dr. Golding Bird agreed in an observation that had fallen from a speaker at the last meeting, that, in the practice of medicine, the great point was to treat the patient, and not the disease. He proceeded to show the necessity of treating various cases of the same disease in various ways, according to the constitution and habits of the patient, &c. He also remarked that the objects of treatment generally of the sagacious practitioner tended to the same result, however different the modes might appear to be.

Dr. Chowne thought that Dr. Willshire's paper illustrated the contradictions which existed in practice. He made some remarks on the evils of treating disease by name instead of in reference to the circumstances of each individual case, and proceeded to make some comments on the difficulties surrounding our knowledge of the effects of remedies.

Dr. Roberts said that the sagacious physician must treat disease according to the circumstances and condition of each case. He illustrated the evils of treating disease by what was called routine practice, by a case of fever, in which bloodletting was resorted to to an enormous and fatal extent, merely because the patient had pain in the head, and bleeding had been found generally of use in the fever prevalent at the time.

Mr. Hird considered the question to be this: were we to trust to the *vis medicatrix naturæ*, or to remedies? He illustrated the evils arising from the passive treatment of acute disease by reference to some fatal cases of pneumonia in horses.

Mr. Kingdon called attention to the

necessity of learning the effects of minute doses of medicine on the nervous system, with the view of avoiding bloodletting and other violent measures in the treatment of disease.

Dr. Willshire having replied, the following prescriptions were read by Dr. Bennett, one having been written on the 6th, and the other on the 9th of the month, by a homœopathist:—

On the 6th, she was ordered to put one grain of ipecacuanha powder in one ounce of water; and of this mixture, a single drop was to be taken with syrup and water directly, and repeated, if necessary, in four hours. The patient was also ordered a mixture, containing one drop of tincture of opium, half an ounce of burnt sugar, and six ounces of water: of this, she was to take two table-spoonfuls every four hours.

On the 9th, she was ordered a mixture, consisting of five ounces of infusion of senna, half an ounce of tincture of jalap, half an ounce of manna, half an ounce of tincture of cardamoms, and two ounces of sulphate of magnesia; and of this she was to take a sixth part every three hours!

Surely these facts required no comment.

At the next meeting, on Monday next, Mr. Pilcher will detail a case of excessive and fatal drain from the kidney.

Medical Intelligence.

MEDICAL ASSISTANTS.

That medical assistants should be an ill-paid class, is not at all surprising, when we find, from the following advertisement, taken from a recent number of the *Times*, that a person advertising for the situation of groom announces himself as "accustomed to the routine of a surgery," and that he "understands dispensing." It is absurd to exclaim against druggists for the employment of ignorant apprentices, when medical practitioners encourage grooms to advertise themselves as dispensing assistants!—"To the Medical Profession.—Wanted, by a young man, a situation as groom to a medical practitioner. Has been accustomed to the routine of a surgery, and understands dispensing. A good character can be given."

ADULTERATION OF ATROPINE.

Dr. Sozzani, knowing the difficulty of procuring the pure alkaloid of the belladonna, except at a very great expense, suspected, from the cheapness of some specimens which he had procured, that the substance must be greatly adulterated. He submitted to a careful analysis a specimen which had been extensively sold in Italy at one half of the usual price. The result of this chemical examination was, that five-sixths of the substance sold for atropine consisted of a mixture of lime, and the carbonate and sulphate of that base, with a small quantity of magnesia, and the remaining sixth was impure atropine! An adulteration of this kind is not only a serious fraud on the purchaser, but is likely to be attended with dangerous consequences, by deceiving the practitioner as to the dose.—*Gazzetta Medica di Milano, Agosto* 1846.

CONFORMATION OF THE BODY IN APOPLECTIC PERSONS.

It is a popular belief, that persons with a peculiar conformation of the body, namely, with large heads, red faces, short necks, and capacious chests, are predisposed to apoplexy, and that persons of spare habit, with longer necks, are exempt from that disease; so that, if a person of this latter description is attacked with apoplexy or hemiplegia, considerable surprise is expressed. My experience causes me to doubt the accuracy of these opinions. The former class of individuals are usually the subjects of considerable hypertrophy of the heart, and hence suffer from habitual determination of blood to the brain, and, perhaps, hypertrophy of that organ. No wonder that they should suffer from attacks of apoplexy. But I have met with many instances of apoplexy and hemiplegia among the poor, when the individuals have been pallid and attenuated with slight figures; in fact, presenting the very reverse of the so-called apoplectic make; and in such cases, upon making a careful scrutiny of the heart and lungs, I have discovered signs of valvular disease in the heart, or, perhaps, of extensive emphysema of the lungs, and these diseases probably combined with changes in the arterial coat.—*Dr. G. Burrows, On Disorders of the Cerebral Circulation, &c.*, p. 143.

THE BLAPS MORTISAGA (CHURCHYARD BEETLE)—TENACITY OF LIFE IN INSECTS.

At the late meeting of the British Association at Southampton, Sir J. Richardson presented to the zoological section a specimen of the beetle known as *blaps mortisaga*, which is said to frequent graveyards, and to prey upon the dead. The specimen presented to the section had been found imbedded in some artificial concrete, where it must have been at least sixteen years, and yet, when the animal was brought to him, it was alive, and had lived six weeks after. Mr. Spence said, that the ordinary duration of life of the blaps martisaga was two or three years, and that it should exist so long was very remarkable. Mr. Darwin stated, that this insect was very tenacious of life.

He once left one in a covered vessel without food for a year, without its being killed. He had also dropped upon one hydrocyanic acid, but it walked off quite unaffected by the poison.

The tenacity of life in this insect has been long noted. Many years ago, Mr. Henry Baker found that the blaps revived after being plunged repeatedly into spirits of wine. On one occasion, it was left a whole night in rectified spirit, but, notwithstanding this, it is stated to have revived, and lived three years. This tenacity of life has not been found to extend to the larvæ of the insect; some of them kept by Mr. Patterson speedily died. Hence it appears very difficult to explain a case reported by Dr. Pickell, in which these larvæ are said to have been expelled for a long period from the human stomach.*

OBITUARY.

On the 1st instant, at Warwick Square, Kensington, R. Heaslop, Esq. late surgeon of the Hon. East India Company's service.

Selections from Journals.

MICROSCOPICAL PATHOLOGY.

MICROSCOPIC EXAMINATION OF THE CONTENTS OF EXANTHEMATOUS VESICLES AND PUSTULES.

This subject has been lately studied by Dr. Seitz. He first examined the vesicles which occur in miliary fever. The contents of these miliary vesicles, when first formed, were clear, and remained fluid for a considerable time. Beneath the microscope were discovered in this fluid small nuclei, and a few distinct cells, somewhat smaller than ordinary pus corpuscles. These latter contained three or more nuclei, which remained after the cell-walls were dissolved away by acetic acid. The fluid obtained from vesicles of longer standing was less fluid and less transparent, and dried more rapidly; it contained the above-mentioned cells, though now in larger quantity: by compression against each other many of them lost their rounded form for a time. The yellowish, thick, and opaque fluid taken from still older and almost dried vesicles, was composed nearly altogether of these cells, which contained more nuclei, and consequently were darker than the ones observed in the fluid of the early formed vesicles. Dr. Seitz also repeatedly examined the contents of the vesicles (or sudamina), which frequently
form on the skin of patients suffer
rheumatic fever, typhus, and so
affections, but he never found cells
above; the contents of the vesicles
ing entirely of an amorphous granu
ter. A similar material was found
also in the pustules of shingles.
vesicles of chicken-pox, however,
served cells similar to the abo
considerably larger, and larger e
ordinary pus-corpuscles, which i
respects they closely resembled.
creased size of the corpuscles o
observed in the fluid from the mili
cles Dr. Seitz thinks may be d
merely on the greater relative siz
pustulæ in varicella than that of th
vesicles. He examined microscopi
composition of the red spots in mea
was never able to detect more th
coagula of blood; no distinct
ance of lymph. In the lymph obtai
cow-pox pustules he observed n
round cells, very similar in size an
appearance to blood-corpuscles:
them contained one, a few two,
their centre. The good qualitie
lymph seemed to be in proportio
number of these cells which it c
though the quantity generally was n
than that of the cells in the fluid o
vesicles. The addition of a drop
acid to the alkaline lymph speedily
the walls of the cells. These vari
are doubtless the active agents con
propagating the disease by cont
Heller's Archiv, Heft 5 and 6, 184

SPECIAL PATHOLOGY.

EMPYEMA COMMUNICATING WIT ABDOMEN. BY DR. FISHE

The author was requested to see th
of this case, during the summer
He found her emaciated to the lowe
She shewed considerable curvatur
spine, and there was a constant dis
a thin greenish pus from an opening
lower margin of the left side of th
This opening, he was soon satisfied,
nicated with the cavity of the chest
was little or no cough. For so
Dr. F. daily expected to hear of h
Things continued in this state for tw
months, when his attention was dir
considerable tumor, yielding a dist
tuation, just above the crest of t
and close to the spine, on the
Upon opening this abscess, half a s
full of matter escaped, similar to th
from the opening in the thorax.
time both openings continued to d
and she became gradually weak
Fisher entertained no hopes of he
length, however, the discharge d

---

* For an account of this case, see Edinburgh Medical and Surgical Journal, October, 1846, p. 384.

very much; she gradually regained her strength, and, to all appearance, recovered entirely. In the spring of 1843, she walked to the narrator's house; she was then in a good condition; indeed, she was fat. About the middle of February, 1844, Dr. F. was again consulted; she had been ill a week with her old complaint. She had much fever, was exceedingly weak, coughed considerably, and expectorated a white mucus. On examining the chest, a slight puffiness was discovered a little below the left clavicle. Percussion yielded a dull sound over a great part of the left half of the thorax, and the metallic tinkling was distinct, accompanying cough and speech. The part below was not affected; she felt no pain, or other peculiar sensation, in the part. Dr. F. prescribed a blister to the chest, and calomel and opium internally. At his next visit he found that the puffiness had disappeared, but in other respects she was worse; the dulness on percussion extended over the whole of the affected side; the metallic tinkling had disappeared. At the end of a week she died. During the last day or two before death, she had occasional delirium; she had also a great deal of vomiting of a dark brown watery matter, and little or nothing could be retained on her stomach; she also passed, at intervals, large quantities of the same matter by the bowels: this was, however, darker coloured, and yielded a sediment of coagulated blood. During the whole of the illness, she had little or no dyspnœa; the pulse was uniformly small, although it varied in rapidity. On post-mortem examination the body was found much emaciated; the curvature of the spine was distinct, but not so great as it appeared during life. On removing the integuments from the costal cartilages, pus unexpectedly escaped, and an opening through the thoracic parietes into the chest was discovered; continuing to remove the integuments, pus again escaped from a similar opening lower down. The left cavity of the pleura contained upwards of three pints of pus. This had compressed the lung so completely against the vertebræ and pericardium, that it appeared airless, and reduced almost to a membranous state. The pleura was found generally thickened; its surface rough; in fact, ulcerated, and covered with pus, considerably thicker than that which ran out. After the removal of the pus, the cavity of the chest was found to communicate with an abscess extending along the left crus of the diaphragm and psoas muscle, down to the crest of the ilium. The communication was established by means of an opening through the diaphragm nearly the size of a dollar. The roots of the lumbar nerves were beautifully dissected; the right lung was perfectly healthy. On raising the left lobe of the liver, an adhesion *between it and* the duodenum was ruptured, and an ulceration of the latter exposed, through which the contents of the bowel escaped; an oval ulceration of the corresponding surface of the liver, which just fitted the pulp of the finger, was discovered. A similar adhesion had taken place between the duodenum and pancreas, but of much greater extent, the perforation of the intestine being at least two inches in diameter. The intestines were generally very much contracted, but seemed otherwise healthy. The liver was double its normal size, and rather friable. The pericardium was found adherent to the heart, throughout its whole extent.—*Montreal Medical Gazette.*

THERAPEUTICS.

THE THERAPEUTICS OF HYDATID FORMATIONS.

Klencke found laurel-water to act as an active poison to the cysticercus. Other therapeutic agents possessing this property with regard to hydatids in general, are camphor, æthereal oil of cubebs, acetic acid, balsam of copaiba, spirits of turpentine, ammonia, and the carbonates. Klencke found electricity to be a powerful destructive agent. He tried it clinically indeed on a man aged 54, who passed acephalocysts and echinococci with the urine. For this purpose he introduced one pole of a small galvanic battery through a glass catheter into the bladder; the other pole was sometimes applied externally to the abdomen, sometimes by means of a glass tube to the rectum, and sometimes to the lumbar region, with the best results, dead hydatids being discharged about four hours after each application, until they ceased altogether.—*British and Foreign Med. Review.*

[Remarks.—Klencke elsewhere observes, that alcohol, iodine, bile, and *urine*, act as poison to the acephalocysts and echinococci; but that they suffer no change from antimony, arsenic, or mercury. If it be correct that these animals are destroyed by immersion in urine, a difficulty becomes attached to the above case, in which electricity was found necessary to destroy the vitality of echinococci passing from the bladder. Common salt also appears to have a destructive effect upon these parasites. Dr. Budd alludes to the fact, that sheep fed in salt marshes are not liable to hydatid disease.

The above facts are, however, of great importance, as affording reasonable clues to the proper means of treating hydatid disease, constitutionally and locally. Klencke's microscopical researches have rendered it almost a matter of certainty that hydatids find entrance into the system by the circulation, and that their germs are carried through every part of the organism, and are deposited in its several tissues, by the blood; he has also shewn the probability of the conclusion that hydatids first become stationary, by impaction of the germs or partly developed animals in some capillary vessels, the canals of which are too narrow to permit their transit; and here they form their nidus, enlarge, and germinate. Hence may be inferred the necessity of employing remedies calculated to act upon the whole mass of the fluids in all cases where hydatid disease presents itself, even in those instances where the parasites appear to have formed merely in some external structure, and where the evacuation of the hydatids and removal or injection of the cyst has hitherto been considered sufficient treatment. It appears to be fortunate that several of the substances which destroy hydatid life are capable of passing unchanged into the circulation; hence the administration of turpentine, cubebs, copaiba, iodine, hydrocyanic acid, alcohol, camphor, various salines, &c. in cases of this description, may be reasonably had recourse to. A singular illustration of the effects of alcohol upon some kinds of hydatids is given by Klencke, in the case of a man who was for a time greatly relieved from cerebral symptoms (which were afterwards found to have depended upon the presence of acephalocysts, echinococci, and cysticerci in the brain), by drinking, in despair, a quantity of brandy. It is, however, not mentioned, in the account of the inspection, whether any collapsed hydatids were found in this person's brain. It would be interesting to ascertain whether individuals habituated to the use of ardent spirits are liable to become the subjects of hydatid disease, and whether the influence of alcohol, turpentine, iodine, &c. in the system, is capable of preventing hydatid infection in the lower animals. The treatment by local means of hydatid tumors originating in internal organs, is a question of more difficulty. It is evident that the destruction of large collections of hydatids may be effected by means of irritating injections, &c.; indeed, this result is well known to occur spontaneously in many cases where, an isolated collection of hydatids having formed in the liver, one of the bile ducts has opened into the cyst, the hydatids have been poisoned, have collapsed, and become partially absorbed, the sac contracting, and undergoing cartilaginous or ossific change. But, on the other hand, the death of the hydatids contained in large internal cysts is occasionally fatal to the patient. We remember to have seen an instance in which death rapidly followed the occurrence of inflammation mechanically excited in a large hydatid tumor connected with the peritoneum. Still, it is probable that, where the collections appear to be moderately circumscribed, *their increase* may be advantageously opposed by the use of local means, such as electricity, as recommended by Klencke. Probably the most effectual means of applying the current would be by affixing the poles of the battery to fine acupuncture needles introduced into various parts of the substance of the tumors. Some valuable suggestive results might be derived from the employment of this and other modes of treatment in the lower animals, where hydatid disease had been produced by inoculation.—Ed. Gaz.]

PHYSIOLOGY.

CASE OF HERMAPHRODITISM. BY JOHN GRIGOR, ESQ.

The subject of this case, a pauper woman, aged 50, died in April 1840; she had been under the author's care for a large inguinal hernia. Circumstances which he had remarked during this person's life caused him to feel anxious to examine the body post-mortem. It was found that an immense inguinal hernia, inclosed in a scrotal-like bag, nearly covered the upper third of the left thigh; and on the contents being returned into the abdomen, it remained large, and like what a scrotum would have been under similar circumstances. Mr. Grigor believes it, however, to have been the left labium major, though he could distinguish little or no trace of a right one. There was a right inguinal hernia, but it had not descended below the external ring. The pubis was well covered with hair. There was a penis-like organ, which, though tightly bound down by the frænum, measured an inch and a half; its gland was imperforate, and the prepuce could not be drawn over the gland. The corona, gland, frænum, and prepuce, were all very distinct. A little below the penis-like organ there was a quill-sized foramen. No trace of vagina was seen; and, in addition to what has been described, a long looking perineum, with some relaxed integuments, formed the external genitals. A probe introduced into the foramen passed downwards for about an inch and a half; this passage was laid open by cutting through skin and a few muscular fibres. The urethra proper and vagina were in this way made visible; they were situated nearer the anus than was normal, and thus obliterated (?) the perineum. The vagina was capable of great dilatation, was about three inches in length, and terminated in a *cul de sac*. The uterus was a mere rudimentary organ, barely capable of admitting a crow-quill; it contained a small quantity of mucus. Neither ovaries nor fallopian tubes could be distinguished, but the round ligaments were very large. The mammary glands were not to be seen, and the nipples were diminutive. The thyroid cartilage was prominent; the pelvis was small. The outline of the bones was prominent. The muscles were well developed. There was an extensive beard, and the individual's voice had been rough, and her deportment masculine. Mr. Grigor ascertained that she was never known to have had vicarious menstruation, or amorous desires. When he first saw the external genitals and bodily configuration, he believed this person to have been as much male as female; and although the preponderance of female organs may entitle her, in popular language, to be called a woman, yet, in strict scientific phrase, this *lusus naturæ* must be termed *neuter*, because the essential organs of both sexes—the testicles and ovaries—were wanting. The author considers that, in jurisprudence, this person would have been considered a female; but he apprehends that, at birth, and indeed during the whole of her life, it would have been difficult to have determined which sex really preponderated.—*London and Edinburgh Monthly Journal of Medical Science.*

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, *Oct.* 2.—G. Houlton.—A. Ford.—J. Higginbottom.—R. C. Shettle.—L. G. Broadbent.—W. Smyth.—T. C. S. Corry.—H. Stevens.—G. R. Schofield.—G. K. Hardie.—T. F. Wall.—J. M. Joseph.—T. F. J'anson.—P. P. Nind.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Oct.* 1.—George Frederick Jones, Clifton.—Edmund John Barker, Stoke-upon-Trent.—Frederick Eachus Wilkinson, Saffron Walden.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Sept. 26.

BIRTHS.		DEATHS.		*Aver. of* 5 *yrs.*	
Males....	650	Males....	406	Males....	493
Females .	630	Females .	402	Females .	475
	1280		808		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts,* 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	119
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	136
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	150
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	199
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	204
Total	808

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Summers; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	808	898	968
SPECIFIED CAUSES	807	892	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		201	188
Sporadic Diseases, viz.—	157		
2. Dropsy, Cancer, &c. of uncertain seat	97	99	104
3. Brain, Spinal Marrow, Nerves, and Senses	129	155	157
4. Lungs, and other Organs of Respiration	219	227	294
5. Heart and Blood-vessels	29	23	27
6. Stomach, Liver, and other Organs of Digestion	79	87	72
7. Diseases of the Kidneys, &c...	12	6	7
Childbirth, Diseases of the Uterus, &c.	11	9	10
9. Rheumatism, Diseases of the Bones, Joints, &c............	4	6	6
10. Skin, Cellular Tissue, &c.	2	1	2
11. Old Age	46	52	67
12. Violence, Privation, Cold, and Intemperance	22	26	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	4	Convulsions	38
Measles	5		
Scarlatina	17	Bronchitis	27
Hooping-cough..	21	Pneumonia......	36
Diarrhœa........	52	Phthisis	131
Cholera..........	7	Dis. of Lungs, &c.	8
Typhus	34	Teething	8
Dropsy..........	10	Dis. Stomach, &c.	6
Sudden deaths ..	9	Dis. of Liver, &c.	9
Hydrocephalus ..	26	Childbirth	7
Apoplexy........	13	Dis. of Uterus, &c.	3
Paralysis........	22		

REMARKS.—The total number of deaths was 90 below the summer and 160 below the annual average. The deaths from zymotic diseases, with the exception of diarrhœa and typhus, were also below the averages. In all the districts, the mortality was below the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·47
" " Thermometer[a].............59·2
Self-registering do.[b] ......max. 90·5 min. 42·5
" in the Thames water " 0· " 60·5

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 1·6: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 1·4° above the mean temperature of the month (57·8°). The extreme hebdomadal range in the self-registering thermometer was 48°.

BOOKS RECEIVED FOR REVIEW,

Continued from Aug. 7.

Microscopical Anatomy of the Human Body, by A. H. Hassall, Parts 1 and 2.—Elements of Physics, by C. F. Peschel, translated from the German by E. West, Vol. 2, Parts 1 and 2, (complete).—The Philosophy of Life, Health, and the Treatment of Disease, by Chas. Searle, M.D. —On Fever, Plague, Contagion, Cholera, &c. by Dr. M'Connell Reed.—Handbook for Bathers, by a Medical Member of Her Majesty's Household. —On the Nerves of the Uterus, by T. S. Beck, Esq. from the Phil. Trans. 1846.—Ormerod's Clinical

Collections.—Chelius's Surgery, Part 13th.—Humboldt's Cosmos, translated by Sabine, Vol. 1.—Medical Report of the House of Recovery and Fever Hospital, Dublin, by G. A. Kennedy, M.D.—Experimental Researches on the Food of Animals, by Dr. R. D. Thomson.—Dr. H. Kennedy on Epidemic Cholera.—The Blood, by C. E. Joseph, being the Warneford Prize Essay.—Sparkes's Introduction to Chemistry.—Traité de la Salubrité dans les Grandes Villes, par J.-B. Monfalcon et A.-P. de Polinière.—Guy's Hospital Reports, N. S. Vol. 4.—Report of Lancaster Lunatic Asylum.—Rapport sur la Peste et les Quarantaines, par M. le Dr. Prus, 3ème et dernière partie.—Denkwürdigkeiten zur Medicinischen Statistik und Staatsarzneikunde, von Dr. J. L. Casper.—A Review of Homœopathy, Allopathy, and Young Physic, by L. M. Lawson, Professor of Pathological Anatomy in Transylvania University, Lexington.—Chemistry and Physic in relation to Physiology and Pathology, by Baron Justus Liebig.—Homœpathy viewed in connexion with Medical Reform.—A Guide to the proper Treatment of the Teeth, &c. by W. K. Bridgman.—Chemistry of the Four Seasons, by Thomas Griffiths.—The Moral Aspects of Medical Life, by J. Mackness, M.D.—Records of Harvey, by James Paget.—Dr. Marshall Hall's Practical Observations and Suggestions in Medicine.—Dr. Golding Bird on Urinary Deposits, 2d edition.

GERMAN MEDICAL WORKS

LATELY PUBLISHED.

Prof. Dr. Ad. Wernher, Handbuch der allgemeinen und speciellen Chirurgie.—Lehrbuch der Chemie, zum Gebrauche bei Vorträgen, so wie auch zum Selbststudium für Mediziner, Pharmaceuten, Landwirthe und Techniker. Faszlich bearbitet von Dr. Wilibald Artus, auszerord. Professor an der Universität Jena.—Handbuch der rationellen Pathologie. Von Dr. J. Henle, Professor der Anatomie und Physiologie in Heidelberg. In 2 Bänd.—Grundriss der Physiologie des Menschen. Für das erste Studium und zur Selbstbelehrung. Von Dr. G. Valentin, ord. Prof. d. Physiologie u. vergl. Anatomie a. d. Univer. Bern.—Encyclopædie der gesammten Medicin, im Vereine mit mehreren Aerzten herausgegeben von Dr. C. C. Schmidt.—Caroli Linnæi systema, genera, species plantarum uno volumine. In usum botanicorum practicum edidit brevique adnotatione explicavit Hermannus Eberhardus Richter. Cum indice alphabetico, edidit Petermann.—Der Uebungscursus in der geburtshülflichen Diagnostik. Anleitung zur methodischen Vornahme solcher Uebungen. Bearbeitet von Leopold von Riecke, ord öffentl. Prof. d. Geburtsh. a. d. Universität Tubingen.—Der Winterschlaf nach seinen Erscheinungen im Thierreich, dargestellt von Dr. H. C. L. Barkow, ord. Prof. d. Medicin u. Director d. Anatomie-Instituts a. d. Königl. Universität zu Breslau.—Das Fieber an sich und das typhöse Fieber, physiologische, pathologische, und therapeutische Untersuchungen von Dr. Heinrich Heidenhain.—Die Urwelt Russlands, durch Abbildungen erläutert von Eduard Eichwald, d. phil., med. u. chirurg. Dr., Akademiker d. St. Petersburgischen med. chirurg. Academie etc. Drittes Heft.

NOTICES TO CORRESPONDENTS.

Portrait of B. B. Cooper, Esq.—A lithographic portrait of this gentlemen has just been published. The artist is Mr. J. Bizo, and the drawing on stone is by Fairland. It is considered by the friends of Mr. Cooper to be a characteristic likeness.

We did not feel sufficiently interested in the matter to make the inquiry suggested by Mr. W. J. Collins. We put the note of interrogation in the report of the case, at p. 553, because we did not think it possible that a *Member of the Royal College of Surgeons of England* should, under any circumstances, be plaintiff in an action for the recovery of the value of *patent* medicines! Mr. Collins writes very indignantly to inform us that he is a member. We therefore recommend our report of the case of Collins *v.* Vidler (p. 553) to the notice of the President and Council of the Royal College of Surgeons.

In our next number we shall publish the Introductory Addresses of Professor Murphy at University College, of Dr. Golding Bird at Guy's Hospital, and of Mr. Erichsen at the Westminster Hospital.

Received.—Mr. Erichsen.—Mr. John Grantham.

DR. J. M. COLEY ON DISEASES OF CHILDREN.

Just published, in 1 vol. 8vo. price 14s. cloth,

A PRACTICAL TREATISE on the DISEASES of CHILDREN. By JAMES MILMAN COLEY, M.D. Member of the Royal College of Physicians in London, &c.

"A very useful and interesting addition to medical literature.—We can recommend Dr. Coley's work as the production of a diligent and experienced investigator in a difficult path of the curative science."—LANCET.

Longman, Brown, Green, and Longmans.

NEW WORK BY SIR BENJAMIN BRODIE.

Just published, in 1 vol. 8vo. price 12s. cloth,

LECTURES illustrative of various subjects in PATHOLOGY and SURGERY. By Sir BENJAMIN C. BRODIE, Bart. F.R.S. Serjeant-Surgeon to the Queen, Surgeon to H.R.H. Prince Albert, Foreign Correspondent of the Institute of France, &c.

By the same Author,

LECTURES on DISEASES of th URINARY ORGANS. 3d Edition. 8vo. 12s.

PATHOLOGICAL and SURGICAL OBSERVATIONS on DISEASES of the JOINTS. 4th Edition, 8vo. 10s. 6d.

LECTURES illustrative of certain LOCAL and NERVOUS AFFECTIONS. 8vo. 4s.

London: Longman, Brown, Green, & Longmans.

MIDDLESEX HOSPITAL SCHOOL of MEDICINE. The Hospital contains 230 Beds, and there were admitted during the past year 2322 In-patients and 10,415 Out-patients.

The Dressers are selected by the Surgeons from the Pupils without additional fee. The Senior-Dressers, in turns, board and reside in the Hospital free of expense. The House-Surgeon is elected half-yearly from the Senior Dressers, and boards and resides in the hospital free of expense.

Clinical instruction regularly given.

Pupils entering to this school may attend the Lectures and the Medical and Surgical Practice by the payment of £35 the first year, £35 the second year, and £15 the third year; after which they will be considered as perpetual pupils of the school.—For further particulars, apply to Mr. De Morgan, Treasurer to the School, at the Hospital, between 12 and half-past 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

FOUNDED 1804.

Consulting Physician.—Dr. Farre.
Physician.—Dr. F. J. Farre.

Surgeons.—G. Macmurdo, Esq.
J. Dalrymple, Esq.; J. Dixon, Esq.
Assistant Surgeons.—G. Critchett, Esq.
W. Bowman, Esq.

Upwards of Seven Thousand patients affected with Diseases of the Eye are under treatment every year at this Hospital; and those whose cases require operation, or who are suffering under severe ophthalmia, are admitted into the wards. The large opportunity thus afforded of acquiring experience in the treatment of this important class of diseases will be found especially valuable to the more advanced pupil and the young practitioner.

Hours of Attendance daily from half-past 8 to 10.

Fee for one Year, Five Guineas.

No further fee is required for subsequent attendance on the practice, but the sanction of the Medical Officers.

REFORM YOUR TAILORS' BILLS.

DOUDNEY AND SON, 49, LOMBARD STREET.

ESTABLISHED 1784.

PRESTON DISPENSARY.— Wanted, a HOUSE-SURGEON to the Preston Dispensary. The salary to be £150 per annum, together with a furnished residence in the Dispensary, rent and taxes free, with coals and gas.

The person appointed will be required to provide an Assistant duly qualified to compound medicine, to be approved of by the committee and medical officers; and also a Matron or Housekeeper for the Institution. Testimonials of qualifications and moral conduct, including his diploma as a member of one of the Royal Colleges of Surgeons, and his certificate as a Licentiate of the Apothecaries' Company, to be sent, under cover, to the Secretary of the Preston Dispensary, on or before the 7th day of November next; and the candidates will be required to attend personally at the Dispensary, on Tuesday, the 17th of November, on which day the appointment is to be made by the Committee.

William Tuson, Sec.

Preston, October 6th, 1846.

Just published, 8vo. 6s. cloth,

A PRACTICAL TREATISE on INFLAMMATION, ULCERATION, and INDURATION of the NECK of the UTERUS; with Remarks on Leucorrhœa and Prolapsus Uteri as Symptoms of this form of Disease. By J. Henry Bennet, M.D. Licentiate of the Royal College of Physicians, Obstetric Physician to the Western Dispensary, &c. &c.

"The descriptions of disease are throughout clear and concise, the arrangement of the subject is judicious, and the remarks are thoroughly practical, and calculated to improve the treatment of a frequent and troublesome class of diseases. In recommending Dr. Bennet's volume, therefore, to our readers as an excellent essay upon the subject, we only convey the impression which its perusal has left upon us."

Dublin Medical Press.

"After the notice we have given, it is unnecessary to express our high opinion of the value of Dr. Bennet's work. It is carefully written, and is evidently the production of a practical physician who has long been familiar with disease."

Dublin Quarterly Journal.

London: John Churchill, Princes Street, Soho.

Next week will be published, post 8vo. cloth, the Second Series of

PRACTICAL OBSERVATIONS and SUGGESTIONS in MEDICINE. By Marshall Hall, M.D. F.R.S.

London: John Churchill, Princes Street, Soho.

On Wednesday next will be published, price 2s.

QUARANTINE and the PLAGUE: being a Summary of the Reports on these subjects recently addressed to the Royal Academy of Medicine in France; with Introductory Observations, Extracts from Parliamentary Correspondence, and Notes. By Gavin Milroy, M.D. &c.

London: S. Highley, 32, Fleet Street.

NEW WORK ON THE FOOD OF ANIMALS AND THE FATTENING OF CATTLE.

Just published, in 1 vol. fcp. 8vo. price 5s. cloth,

EXPERIMENTAL RESEARCHES on the FOOD of ANIMALS and the FATTENING of CATTLE: with Remarks on the Food of Man. By Robert Dundas Thomson, M.D. of the University of Glasgow.

"The question of the origin of the fat of animals appears to be completely resolved by these beautiful and elaborate experiments."

Baron Liebig.

Longman, Brown, Green, and Longmans.

MR. TEALE'S TREATISE ON HERNIA.

Just published, 8vo. with numerous Illustrations, price 15s.

A PRACTICAL TREATISE on ABDOMINAL HERNIA. By Thomas Pridgin Teale, F.R.S. F.R.C.S. and Surgeon to the Leeds General Infirmary.

"The book before us we at once pronounce unexceptionably good, and fulfilling to the utmost the stated object of its publication. Students and junior practitioners will find it an invaluable and unfailing guide."

Brit. and For. Med. Review.

Longman, Brown, Green, and Longmans.

ADVERTISEMENTS.

Next week will be published, in one thick 8vo. volume, the Third Edition with considerable additions,

PRINCIPLES of HUMAN PHYSIOLOGY. By W. B. Carpenter, M.D. F.R.S. With numerous Illustrations on Steel and Wood.

London: John Churchill, Princes Street, Soho.

ROYAL COLLEGE of SURGEONS in IRELAND.—The Winter Session commences on Monday, October 26th.

Anatomy and Physiology—Dr. Jacob.
Practical and Descriptive Anatomy—Dr. Hargrave and Dr. Hart.
Surgery—Dr. Wilmot and Dr. Porter.
Practice of Medicine—Dr. Benson.
Chemistry—Dr. Apjohn.
Materia Medica—Dr. Williams.
Midwifery and the Diseases of Women and Children—Dr. Beatty.
Medical Jurisprudence—Dr. Geoghegan.
Hygiene—
Botany—Dr. Bellingham.
Natural Philosophy—Dr. Apjohn.
Comparative Anatomy—Dr. Jacob.

The Anatomical Demonstrations and Dissections are conducted by the Professors of Practical and Descriptive Anatomy, assisted by the Demonstrators, Mr. Leeson, Mr. Labatt, and Mr. Thorpe.

The Professor of Chemistry gives a separate course on Practical Chemistry, and admits operating Pupils into the Laboratory.

Students, or their friends, requiring correct information respecting the course of Instruction at the College, should apply to some of the Professors or to the Registrar. They are advised also to commence attendance at the beginning of the Session, although they are permitted to enter so late as the 25th of November; the date of entry being inserted in the returns forwarded to the Colleges.—By order,

C. O'Keefe, Registrar.

CITY OF DUBLIN HOSPITAL.

The course of Practical, Medical, and Surgical Instruction in this hospital will commence on Monday, the 26th of October. The Clinical Lectures will be delivered on three days in each week during the session, by Dr. Jacob, Dr. Benson, Dr. Hargrave, Dr. Williams, Mr. Orr, and Dr. Geoghegan; and on the Diseases peculiar to Women and Children, by Dr. Beatty.

Dr. Jacob's Clinical Lectures on Diseases of the Eye, illustrated by the Cases in the hospital, are open to the Pupils in attendance.

Sir H. Marsh, and Dr. Apjohn, the Consulting Physicians; and Dr. Wilmot, and Dr. Porter, the Consulting Surgeons, give their assistance in cases requiring consultation.

The certificates of attendance are received as qualification by all the Colleges, Halls, and Boards.

DISEASES OF THE EYE.

Dr. Jacob will deliver a full course of Lectures on the Anatomy, Physiology, and Optical Mechanism of the Eye, during the ensuing session; and also a separate course on its Pathelogy and Diseases, with the Operations required in their Treatment, in the City of Dublin Hospital.

Next week will be published, illustrated with numerous Engravings on Wood by Bagg, fcp. 8vo. cloth,

A MANUAL of MATERIA MEDICA and THERAPEUTICS. By J. F. Royle, M.D. F.R.S. Professor of Materia Medica and Therapeutics in King's College, London.

London: John Churchill, Princes Street, Soho.

KENT and CANTERBURY HOSPITAL.—The Board of Management give notice that a Vacancy has occurred in the office of SURGEON, by the resignation of Mr. Henry Crawford.

That in pursuance of Rule 27, a Joint Meeting of the Board of Management, and of the Physicians and Surgeons, will be held in the Hospital, on Friday, the 16th of October next, at half-past one o'clock, to receive and examine the Testimonials, and to make out a list of qualified Candidates.

And that the Election will take place in the Hospital, on Thursday, the 22d October, at 12 o'clock, at which hour the ballot will commence, and will terminate at 2.

By order of the Board of Management,
Thomas Southee, Sec.

Hospital, Sept. 30th, 1846.

THE NATIONAL INSTITUTE of MEDICINE, SURGERY, and MIDWIFERY.—Notice is hereby given that the Subscription for the Membership of the National Institute is fixed at One Guinea annually, both for Metropolitan and Provincial Members, and that the Election of a Council will take place in the last week in October. Balloting Papers will be delivered to every member of the Institute as early as possible.

The objects of the Institute are,—to maintain an effective organization of the General Practitioners; to expose, discourage, and repress by registration, and every other practicable means, illegal and unqualified practice; to employ all legitimate means for the purpose of urging upon the government and the legislature the claims of the General Practitioners of this country to Corporate Rights; to promote a high standard of education and qualification, with a satisfactory test by efficient examination, for every individual authorised by law to practise Medicine, Surgery, and Midwifery; and to form, irrespective of the special colleges, an Institution comprising within itself the entire range of Medical and Surgical knowledge.

Members of the profession can obtain information and enrol themselves as members of the Institute on application at the Office, 294, Regent Street.

It is requested that Post Office orders be made payable at the Branch Post Office, Old Cavendish Street, to one of the Treasurers, John Dodd, Esq., Portman Street, Portman Square, or Edward Tegart, Esq., Pall Mall; and that the name of the gentleman who is to receive the amount be mentioned in the letter of advice.

By order of the Sub-Committee,
George Ross, Sec. pro. tem.

October, 6, 1846.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by Eliezer Chater Wilson, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by William Longman, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Oct. 9, 1846.

No 985.—Vol. XXXVIII.
[New Series, No. 77.]

Price {Unstamped, 8d.
Stamped.... 9d.

LONDON MEDICAL GAZETTE

OR

Journal of Practical Medicine.

Published every Friday Morning.

October 16, 1846.

Also in Monthly Parts.

LECTURES.

Page
Introductory Lecture, delivered at University College, London, October 1, 1846, by E. W. Murphy, A.M. M.D. Professor of Midwifery 647
Introductory Lecture, delivered, October 1st, at the Opening of the Medical School of Guy's Hospital, for the Session 1846-7. By Golding Bird, A.M. M.D. F.R.S. Fellow of the Royal College of Physicians 657
Introductory Address, delivered by Dr. Erichsen, at the Opening of the Westminster Hospital Medical School, on October 3d 668

ORIGINAL COMMUNICATIONS.

On the Diagnosis and Treatment of Rupture of the Tendon of the Triceps Cruralis Muscle. By John Grantham, Esq. Fellow of the Royal College of Surgeons, &c. .. 970
Cases treated at the Westminster Hospital. Reported by Mr. F. Wildbore, M.R.C.S.L. House-Surgeon 671
- Fractured Ribs and Forearm, with Chest Complications, &c. 671
- Comminuted Fracture of Femur—Non-union—Phthisis 672

LEADING ARTICLES.

Necessity for preventing Interment in Towns 673
State of the Public Health 675

REVIEWS.

Inaugural Dissertation on Yellow Fever, and on the Treatment of that Disease by Saline Medicine. By G. F. Bone, M.D. Assistant-Surgeon to the Forces.......... 676
A Practical Treatise on the Diseases of Children. By James Milman Coley, M.D. &c. 678
Practical Surgery. By R. Liston, F.R.S.... 679
A Practical Manual; containing a Description of the general Chemical and Microscopical Characters of the Blood and Secretions. By J. W. Griffith, M.D. F.L.S. &c. 682
A Guide for the Proper Treatment of the Teeth, &c. By W. K. Bridgman 683

PROCEEDINGS OF SOCIETIES.

Page
Medical Society of London.—Mr. Pilcher on a Case of Diabetes 683

CORRESPONDENCE.

Case in which a Musket-ball was accidentally swallowed. By W. S. G. Davies, M.D. S.R.N. Licentiate of the Royal College of Physicians, London 680

SELECTIONS FROM JOURNALS, ETC.

Belladonna in Strangulated Hernia. By Dr. G. B. de Borsa, of Verona 656
Case of Imperforate Uterus occurring in a Second Pregnancy. By Dr. R. W. Wright 689
Two Cases of Aneurism cured by Ligature of the Femoral Artery, without confinement to bed, terminating favourably. By J. Kirby, Esq. 690
On the Formation of Fat in the Animal Body 690

MEDICAL INTELLIGENCE.

Treatment of Urinary Fistulæ.......... 656
A Point of Diagnosis between Rubeola and Scarlatina 669
Epidemic Dysentery at Dusseldorf.......... 670
An Academy of Medicine at Constantinople 675
Vinegar in Poisoning by Opium.......... 683
Bronchitis caused by the presence of a Cherry-stone in the Air-passages 685
Presidentship of the Royal Society 686
Animal Magnetism—Clairvoyance 686
Pharmacy in Prussia 687
Great Mortality in Belgium.......... 687
The Victims of the Plague at Marseilles (1720) 687
A Homœopathic Congress in London 687
Case of Poisoning by the Roots of the Parsnip 687
Phosphorescence of Sea-water.......... 689

WEEKLY TABLES, ETC.

Royal College of Surgeons.—List of Gentlemen admitted Members 690
Apothecaries' Hall.—Gentlemen who have obtained Certificates 690
Births and Deaths in the Metropolis.......... 690
Meteorological Summary.......... 690
Notices to Correspondents 690

[For Advertisements, see next page.

THE AUTHORISED ENGLISH TRANSLATION.

Just published, Vol. 1, post 8vo. price 12s. cloth,

HUMBOLDT'S COSMOS: Sketch of a Physical Description of the Universe. Translated, with the Author's sanction and co-operation, under the superintendence of Lieut.-Col. Edward Sabine, R.A. For. Sec. R.S.

"The present translation was undertaken in compliance with the author's wish, and is ably executed, reading like an original work."

Spectator.

*** The Second Volume is in the press.

London: Longman, Brown, Green, and Longmans; and John Murray, Albemarle Street.

NEW WORK BY SIR BENJAMIN BRODIE.

Just published, in 1 vol. 8vo. price 12s. cloth,

LECTURES illustrative of various subjects in PATHOLOGY and SURGERY. By Sir Benjamin C. Brodie, Bart. F.R.S. Serjeant-Surgeon to the Queen, Surgeon to H.R.H. Prince Albert, Foreign Correspondent of the Institute of France, &c.

By the same Author,

LECTURES on DISEASES of the URINARY ORGANS. 3d Edition. 8vo. 12s.

PATHOLOGICAL and SURGICAL OBSERVATIONS on DISEASES of the JOINTS. 4th Edition, 8vo. 10s. 6d.

LECTURES illustrative of certain LOCAL and NERVOUS AFFECTIONS. 8vo. 4s.

London: Longman, Brown, Green, & Longmans.

MIDDLESEX HOSPITAL SCHOOL of MEDICINE. The Hospital contains 250 Beds, and there were admitted during the past year 2322 In-patients and 10,415 Out-patients.

The Dressers are selected by the Surgeons from the Pupils without additional fee. The Senior-Dressers, in turns, board and reside in the Hospital free of expense. The House-Surgeon is elected half-yearly from the Senior Dressers, and boards and resides in the hospital free of expense.

Clinical instruction regularly given.

Pupils entering to this school may attend the Lectures and the Medical and Surgical Practice by the payment of £35 the first year, £35 the second year, and £15 the third year; after which they will be considered as perpetual pupils of the school.—For further particulars, apply to Mr. De Morgan, Treasurer to the School, at the Hospital, between 12 and half-past 2.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES, offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Saltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton; by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the *public against spurious* articles.

ROBINSON ON THE TEETH.

Just published, with 139 Engravings, price 10s.

THE SURGICAL, MECHANICAL, and MEDICAL TREATMENT of the TEETH; including a complete Treatise on Dental Mechanism. By James Robinson, Surgeon-Dentist to the Metropolitan Hospital, &c. &c.

W. Webster, 60, Piccadilly, London; Lindsay and Blakiston, Philadelphia, U.S.

DR. HUGHES ON DISEASES OF THE LUNGS AND THE HEART.

Just published, fcp. 8vo. 6s. cloth,

A CLINICAL INTRODUCTION to the PRACTICE of AUSCULTATION, and other Modes of Physical Diagnosis; intended to simplify the Study of the Diseases of the Lungs and Heart. By H. M. Hughes, M.D. Fellow of the Royal College of Physicians, Assistant-Physician to Guy's Hospital, &c.

"That a really practical manual of auscultation for students has been long required cannot be doubted. Dr. Hughes has, we conceive, been perfectly successful in supplying the desideratum. We recommend this volume to the student as an inseparable companion to the stethoscope throughout the whole period of his hospital studies."—Medical Gazette.

"This is a very excellent work, and cannot fail to be of great use to the attentive student In it will be found every information requisite to direct his proceedings in the clinical study of auscultation. The author does not pretend to any originality, but every page shows that he has learnt what he teaches from the great book of nature, as well as from the writings of his predecessors."—Brit. and For. Med. Rev.

"Our opinion is, that a work like that of Dr. Hughes was much wanted...... He has confined himself to his subject, and treated it well."

Medical Times.

Longman, Brown, Green, and Longmans.

SCHOOL of ANATOMY and MEDICINE, adjoining St. George's Hospital. — The Introductory Address was delivered by Dr. Theophilus Thompson, F.R.S. on Thursday, October 1, 1846, at half-past 2 o'clock.

Anatomy, Physiology, and Surgical Anatomy—Mr. Lane, Dr. W. V. Pettigrew, and Mr. G. E. Blenkins.
Descriptive and Practical Anatomy—Dr. W. V. Pettigrew, and Mr G. E. Blenkins.
Prosectors and Anatomical Tutors — Mr. F. Hatchard, and Mr. Croft.
Chemistry—Mr. Rodgers.
Materia Medica and Therapeutics—Dr. Lankester, F.R.S. F.L.S.
Midwifery and Diseases of Women and Children —Mr. Bloxam.
The Principles and Practice of Medicine—Dr. Goolden, and Dr. Theophilus Thompson.
The Principles and Practice of Surgery—Mr. Lane and Mr. Pilcher.

SUMMER SESSION.

Medical Jurisprudence—Mr. Ancell, and Mr. Warder.
Botany—Dr. Lankester, F.R.S.
Practical Chemistry—Mr. Rodgers.

Perpetual Fee—Forty Guineas, qualifying for all Medical Boards of Examination.

Further particulars respecting the School may be obtained on application at the Theatre, 1, Grosvenor Place; or to the Honorary Secretary, Dr. V. W. Pettigrew, 30, Chester Street, and at the residences of the different Lecturers.

Lectures.

)DUCTORY LECTURE,

at University College, London, October 1, 1846,

W. Murphy, A.M. M.D.
Professor of Midwifery.

tline of medical studies—their character as illustrated by hemistry, comparative anatomy, y, and pathology.—The obser- f disease the proper object of .—Therapeutics.—The position medical as a scientific profession old is not maintained—some of s leading to its depression: a education, both general and nal.—A good general education more imperative.—Errors to be by the student in his professional s: 1. a mistaken idea of the his medical education: 2. theo- a few facts; 4. assumed facts. ry a branch of medicine—culti- the sentient faculties—the hand educated—intuitive knowledge by habit.—Midwifery a branch ine too much neglected.—Con-

x, — In compliance with the the faculty of medicine I have the duty of opening the present n the usual introductory address. so, I shall, perhaps, best fulfil e for which such discourses are y giving you a brief outline of the you have adopted, considered elementary study and as a prac- it, and by bringing before your points connected with your pro- ducation as appear to me to be y of your attention.

the various paths of science he tree of knowledge, I know of rinds its way through a richer, a l, a more attractive scenery, than conducts you to the knowledge e;—none more abounds with ntense interest to the philosophic e is better calculated to improve elings of our nature. The edu- essary to medicine extends its to every subject within the bservation. The inquiring mind and gratified by the abundant ons of nature's handiwork, and ces which are the handmaids of oint out in every—the *most tri- s that surround you—subjects of research.*

If, in your rural walks, the rich verdure, the varied foliage, the fragrant breezes of the country, give you pleasure; if you delight

> "To see the country far diffused around
> One boundless blush, one white empurpled shower
> Of mingled blossoms; where the enraptured eye
> Hurries from joy to joy"—

How much are the sources of your enjoyment increased by *botany*,—a science that reveals, in the perfect construction and arrangement of every blade of grass on which you tread, of every leaf you see, the operations of a master-mind, — a science that points out in that "white empurpled shower of mingled blossoms," not merely a beauty in their colouring and odour, but such manifestations of design, in their most intimate structure, as must stimulate and give zest to the most inquisitive examination. She presents to you the wildest, the most despised flowers of the plain, as possessing attractions far more interesting than those which excited the poet's exclamations of ecstacy; and in the common dandelion, the poppy, the fox-glove, and the bird-weed, she shows you examples of plants concealing properties of far greater value to you than either the lily or the rose.

Again, if the air you breathe, the earth on which you tread, the lightning's flash, or the thunder that peals above you, excite your curiosity, *chemistry* opens a book of knowledge that not only satisfies these inquiries, but which extends itself to matter in every form, analyses its component parts, and points out the ultimate elements of everything in nature. Chemistry teaches you the laws by which they are combined, the powers by which they are resolved; and when the endless variety of these combinations is considered, the distinctive properties that belong to each, the very few elements of which they are composed, and the simple and definite laws by which they are governed, you will admit that if none other belonged to medicine, this science alone would elevate it to the highest rank in scientific professions.

Shall I pursue this hypothesis further, and suppose you to withdraw from the observation of the external world? To retire in thought to the little world that exists within. Do you seek to know the power that directs your footsteps?—the means by which these pleasing impressions are produced upon your senses?—how you see, hear, taste, smell? Another science here presents to you her treasures, and makes you conversant with facts of a still more impressive interest. By the aid of *anatomy and physiology* you learn that you are provided with innumerable moving powers, acting in perfect obedience to dynamic laws, assisting and controlling each other's movements so as to produce accurately the motion you design. You are taught that these muscles are traversed in every direction by the finest filaments, which, coalescing into twigs, unite to form leading branches; that these meet in a great central trunk, which is in direct connection with the brain, the organ of the mind. You find that these nerves are the messengers which convey your will to every part of the body; that it is on these minute and sensitive fibrils, collected into special organs, that the light, the air, and surrounding objects, produce the impressions conveyed by sight, by hearing, and other senses. You have evidence that every idea you receive, every movement you make, is effected through the agency of these filaments, and that with a rapidity as well as an accuracy that cannot fail to excite your surprise. Consider for a moment the series of operations that are going forward when the muscles are called into rapid exercise. Reflect on what takes place when a musician, for example, plays the violin or the pianoforte. The finger that strikes the note moves in obedience to the will conveyed to it by the nerves; the will is governed by the sounds previously impressed upon the nerves of hearing: the sound to be conveyed must be accurately determined before the will can act, and that with a nicety of discrimination, in which consists the excellence of music. There is, therefore, the sound produced upon the ear by the preceding note, the communication of that sound to the brain, the selection of the required note, and the transmission of the will to the mechanic power — the finger. There are all these successive operations necessary to strike a single note of music. But, when several notes are played, when a thousand fly into a maze of the most thrilling harmonies with that rapidity of combination that is witnessed in the elaborate execution of some eminent musician, you cannot measure the extent of this power—your mind is humbled before it, in the confession that you are "fearfully and wonderfully made."

Is the thirst for natural knowledge which such subjects must excite limited to these springs of enjoyment? No. *Comparative anatomy*, the *science of anatomy*, conducts you through the whole of animated creation, and offers new temptations to indulge in scientific inquiries of the deepest interest. From the motley multitude of human beings that surround you she adduces a thousand illustrations of the simple uniformity of their anatomical construction; she brings *before* your notice an endless variety of *forms, and* from the most apparent contradictions *proves* the unity of their design: she descends into the bowels of the earth, and from the fossil fragments that she finds there, construc tsan osteology by which she can produce the gigantic zoology of an antidiluvian world; nay more, by which she can determine the chronology of ages before the memory of man.

Shall I suppose your busy thought not yet satisfied? Do you seek to know how your organization is preserved? How this piece of natural mechanism is kept in order? How the wear and tear of the machinery is supplied? How injury to it is prevented? It is the province of *physiology* to teach you this; and much more than this. *Physiology* explains to you the uses of a fluid which circulates through vessels as numerous and minute as the finest nervous filaments; a fluid which conveys to every structure a supply of new material, and removes whatever is unfit: returns again to the centre of the circulation, is renewed, and propelled with force to afford a second supply. The source also from which this fluid obtains its nutrient particles furnishes a new subject for observation. The stomach and other organs of digestion form a natural laboratory in which your food and drinks are analysed and reduced to their elements, again to enter into new combinations. The nutritious molecules constitute a bland and milky fluid, which is carried by special vessels to the blood: the residue is expelled by proper channels from the body.

Neither are these elaborate operations, nor this complex mechanism, without provision for their security. The nerves to which we have alluded are not alone the agents which keep the machine in order, they are also the guardians that preserve it from injury; they do not merely sustain the vital functions, but give instant warning when their actions are deranged, or are inefficiently performed. The pain that is caused by wounds or bruises is a sufficient evidence of their care to preserve the body from external injury. Imprudence soon receives an admonition not easily forgotten. Injury to the vital functions manifests itself by those disagreeable phenomena that collectively constitute disease. The number and variety of these maladies prove the activity of the organic nerves, and also demonstrate that we do not always obey the great law of nature, because excesses in food, in drink, and in other indulgences, become a fertile source from whence they spring. We fly danger from without, but from the perils that are within we do not always seek our self-preservation.

Thus in the elementary studies of medicine you will find numerous subjects of scientific interest which will lead the mind through a series of investigations into Nature's laws that must have the same effect in elevating and improving the intellectual faculties as other sciences.

In the study of disease not only is the same scientific inquiry pursued, but in anxiously seeking out the means of preventing its mischievous effects, and in endeavouring to restore these impaired functions to their healthy state, there is the additional source of enjoyment in being the medium of relief from "the thousand ills that flesh is heir to." The accomplished physician is not alone the scientific observer of nature, but is the best benefactor of suffering humanity. In the ordinary practice of his profession the reward of his success is not merely the emolument resulting from it, but the gratification which he must experience in saving a fellow-mortal from much suffering,—perhaps from death itself. The finer feelings of humanity are called into exercise quite as frequently as his mental powers of observation.

The study of disease, the special study of medicine, presents as wide and as interesting a field of inquiry as any of those preparatory subjects to which we have alluded. A new science is here presented to us which is only beginning to receive the attention which its importance merits. *Pathological anatomy* exposes to your view the latent blights that gradually corrode the vital organs, taints that are often slow in their destructive progress, and may exist when health seems unimpaired. This science teaches the morbid changes that take place in different tissues when under the influence of disease, and points out the permanent injury that frequently remains when the disorder itself has altogether disappeared. Here you observe the efforts—too often the fruitless efforts—of nature to resist the incursions of the malady, and to preserve the integrity of the vital organs. Even in her failures you still perceive and admire her inexhaustible resources, in continuing by a variety of supplemental means some necessary action that the proper organ can no longer maintain.

When the mind is thus trained by these introductory sciences, the *observation of disease* excites a new interest, and will fully repay any attention that may be bestowed upon it; but patience is necessary in order thoroughly to understand what is before you, and much caution lest you be drawn from the facts themselves into vague speculations concerning them. Certain effects are produced on the constitution by disease, that are marked by corresponding signs, which are called symptoms; the connection between the sign and the thing signified is often very obscure, so that several such signs are necessary before their cause is intelligible: the same *symptom must be* frequently *observed in the same relation in* order to determine its meaning. Thus, in the observation of a suffering patient, you are, as it were, learning the *language of medicine*; a very difficult language to be thoroughly acquainted with, but one in which you will acquire, by persevering attention, a facility that gives you (as in other languages) a superiority over the less educated, which is your chief support in your determination to maintain the respect which is due to your profession.

When the nature of the disorder is ascertained the means of arresting its progress have then to be considered. The operations of various medicines on the constitution is a still more difficult subject of inquiry. The obscurity that hangs over the action of medicines on the vital functions conceals from us an important link in the chain of reasoning respecting them: the ultimate effect is observed, the remedy arrests the mischievous progress of the disease, but how it does so is difficult to explain; hence, in *therapeutics*, empiricism gains a triumph not otherwise attainable: the sanative effect of a remedy is too frequently matter of mere speculation, and in speculations the quack is generally much more successful than the scientific physician. The action of medicines, therefore, requires a very close and careful attention in order to observe their true effect, and to determine their value; but, when this knowledge is obtained, the great object of your previous study is accomplished. You not only recognise the disease, but are provided with the means of arresting its progress; and thus may restore the sufferer, who seeks your aid, to the blessings of health.

This slight and very imperfect sketch of the profession which is the object of your choice, is sufficient, I would hope, to prove to you its scientific character as a study, its benevolent and ennobling tendency as a pursuit; enough, I trust, to claim for medicine a place in the rank of scientific professions. This postulate will, I am persuaded, receive your assent, yet I regret to be obliged to confess that medicine is beginning to hold but a humble rank among her sister professions, and her followers do not always meet with that respect which is the reward of so honourable and useful a calling. Many causes conspire to this effect, to some of which it is unnecessary here to allude, because the remedy is not within our power; but others of them seem to me to be so completely within the reach of correction that it is my duty to direct attention to them. The most prominent of those causes that contribute to lower the medical profession, and that operate most frequently to its disadvantage, is *a deficient education, both general and professional*.

The course of medical studies upon which you are about to enter abounds with the most interesting, but, at the same time, with some of the most difficult questions that science can investigate. The student whose mind is imperfectly cultivated, and whose reasoning powers have never been trained by the stricter sciences, when he ventures within a path so rich in scientific attractions, but so surrounded with doubts and obscurities, is soon bewildered, and lost in its intricacies. He seeks not to follow its windings patiently, and to cull with care from the abundance that surrounds him. On the contrary, he is much more anxious to find out a guide who will tell him the shortest road to his ultimate destination; one who will help him to scramble as he best may over the barrier that protects your profession from the surrounding crowd of empirics. It is not surprising that such alumni of a profession claiming a title to science, meet with little respect from a discerning public,—a public who will always judge for themselves, and who cannot perceive either in scientific attainments, or in general information, the slightest difference between the practitioner thus qualified and the pretender he left behind. Neither will success in practice decide the question; the latter is often more fortunate than the former.

Legislation may correct an evil of this kind, but I think it can be remedied without it: your co-operation, and the aid of those presiding over medical education, only is required. It chiefly remains with you to maintain the character of the medical profession, and to prove to the public by your superior intelligence that a medical man is something more than a vender of nostrums—that he is not merely a licensed charlatan.

To accomplish this purpose efficiently it is necessary to avail yourselves to the utmost of all the means of education now freely open to you. The present improved state of the Colleges and Schools of Medicine affords every facility in acquiring a correct and perfect knowledge of medical sciences. Human and comparative anatomy; physiology and the structure of tissues; chemistry, both organic and inorganic; botany and materia medica;—In each and in all of these there is no want that I think you will not find supplied; and when you have acquired a correct knowledge of these elementary subjects, so as to direct your attention to more practical studies in medicine, in surgery, and, I trust, also in midwifery, there are abundant aids to advance your progress.

The assistance within your reach is not limited to lectures or to clinical instruction. The numerous and valuable elementary works which in the present day teem from the press, supply such an abundance of excellent instruction on every medical subject as to amount almost to superfluity; you are fast hastening to that point of perplexity in selecting your literary food, that there is danger lest your intellectual appetite may become pallid from satiety. The booksellers are aware of this, and, in their alarm, tax their invention to contrive some new, some more tempting luxury to gratify your taste. Ponderous cyclopædias are now succeeded by handsome pocket manuals, folio and quarto volumes of plates by beautifully-executed woodcuts of the smallest size, works extended through volumes are condensed into portable octavos,—all proving the danger which they apprehend. In fact, I know of no deficiency in the means of medical instruction, nor is there any want of stimulus to excite you to exertion.

I wish I could speak with the same confidence of a part of your education that is quite as essential as that to which I have alluded. I could desire to see some more decided movement made in favour of the general education of the medical student. I should be glad to see its importance more universally admitted—that its necessity was more imperative. I am anxious, in fact, that "Celsus, with its interlineal translation," should find no purchasers. It would seem as if the knowledge of general literature and science, which is considered indispensable to the sister professions, becomes only a matter of taste in the medical profession; as if that amount of information which is absolutely requisite to the educated gentleman is only a kind of ornament to the professional garb, which may be worn or dispensed with at pleasure. On the principle of practical utility I have even heard it argued, that the living languages are all that are necessary for a medical man; but that, of the dead languages, Latin is quite sufficient for him, because it is the only one he is called upon to use in the exercise of his profession: it is the language, forsooth, in which he writes his prescriptions! If this were true, his knowledge even of Latin need not exceed the hybrid symbols called medical Latin, which may be easily acquired in a few weeks. Such a view of the attainments requisite for the cultivation of a scientific profession is, I trust, too unsubstantial to receive your consideration. You will, perhaps, admit with me, that an education in classical literature and general science is necessary for the student in medicine, on precisely the same principle that it is sought for by, and made the *sine quâ non* of, students in other professions. By these literary and scientific exercises the intellectual powers are improved and elevated, and the medical student, equally as his fellows, obtains, through a liberal education, that superiority in general information and refinement which always secures respect. Like them, also, he enters upon his proper professional studies with every advantage this previous training can give him,—advantages which the modern languages only cannot supply. None can appreciate more than I do the value of an acquaintance with the modern languages—the sources of your information are thus greatly increased, the valuable observations and discoveries of the great medical authorities of the continent are thrown open to you, and, being as it were a citizen of the world of science, your position is exalted,—but that knowledge is no substitute for a classical education. In the study of the dead languages, you are, in fact, studying the principles of your own, and are obtaining the best means of so improving your comprehension of these principles as to make it available to you hereafter, when, in your turn, you desire to communicate your own observations to the world. A facility in the living languages may be acquired without any such knowledge. The opportunity and practice of speaking them is sufficient, and it is quite possible you might even obtain a character for conversational powers in French, German, and other continental languages, and yet betray a lamentable deficiency in your mother tongue.

It appears to me, that a liberal education is quite as important to medicine as either to law or divinity. But if the more limited view of this question be still insisted upon—if the analogy between the professions be denied—if necessity be the only principle that is to govern professional education—and if it be asserted that these general acquirements are superfluous in medicine, but are essential to the sister professions,—I confess my inability to perceive the force of the argument. Theology and law may both be studied in an English dress. The most valuable works in each profession are in the vernacular language, and are quite adequate to all practical purposes. The difficulties of critical interpretation are generally resolved by a few learned linguists, whose authority the student in divinity may safely receive. A classical education is not, therefore, indispensable to him, nor is it easy to perceive what assistance the Roman poets or the Greek dramatists can give him in his studies. The same objection applies to law. Legal, like medical Latin, may be necessary, but classical attainments are by no means essential. Abstract science is equally useless to him. A knowledge of the laws which govern the motions of the celestial luminaries can in no way aid his comprehension of the statutes that rule his terrestrial fellow subjects. It would be a useless trespass on your time further to demonstrate the *obvious absurdities to which* such a line of reasoning would lead; I would simply repeat, that a liberal education is valuable to the student in medicine, not because the knowledge thus obtained is constantly called into exercise, but because through its influence his mental faculties are better fitted for the study of scientific subjects, in which highly cultivated intellectual powers are required. The church and the bar fully appreciate its importance; I wish that I could add that the medical profession, one so highly scientific, also insisted upon its necessity.

I am the more anxious to combat these objections, because, if such an erroneous view of medical education be once established, medicine is degraded from its proper position; it is no longer a liberal profession, and its followers cannot receive that respect which the public accord to "men of education." I am equally desirous to direct attention to this question, because this deficiency does not depend upon any want of means for acquiring a competent general education. The facilities for this purpose are now just as much within the reach of the general class of students as formerly they were beyond them.

Thanks to the untiring energy and persevering exertions of the President of this College, "the schoolmaster is now abroad;" and there are just the same opportunities in this and in other colleges for acquiring a knowledge of Greek and Latin, of mathematics and physics, of logic and ethics, as there is for medicine and surgery. The only desideratum that remains is the cooperation of *all* examining bodies to render this part of education imperative. It rests with those who superintend the admission of medical students, to apply, either directly or indirectly, such a competent test as will secure attention to it.

The correction of the second defect, *an imperfect medical education*, rests entirely with you; and in order to assist you in this object, I shall take this opportunity of pointing out to you some errors that must be avoided in pursuing the course of study you are now entering upon.

A mistaken idea of the object of medical education appears to me to be a very common error with the medical student. His final examination is too frequently the sole end that he looks to; the diploma or license to practise is the prize for which he contends, and nothing more: to obtain this is the reward of his highest ambition. Hence has arisen a most grievous abuse in medical education, the system of teaching the pupil, not the sciences that belong to medicine, but simply the answers to those questions which it is probable he may be asked, questions which it is difficult to understand how they can be known, but which nevertheless are guessed at with tolerable accuracy by those whose business it is to watch these examinations. This mode of abbreviating the labour and time of study may answer the purpose of obtaining a license to practise, but will for ever deprive the practitioner of the power of rendering his privilege available in securing for himself that position which a competent education alone can give him. It is possible also that he may find that he has mistaken the shadow for the substance. Some accident may so expose his ignorance that he loses the little reputation which his diploma had given him.

It is necessary to recollect that it is the object of examining bodies to determine the *minimum*, not the *maximum*, qualification of a candidate. They desire rather to decide on the amount of competency that will secure the public from mischievous ignorance, than to select the best qualified amongst a given number of competitors. The licence to practise does not obtain practice, and the successful candidate for a diploma will often find that he has, in the scrutiny of his rivals, and in the observation—perhaps I should rather say the indifference of the public—a much more trying ordeal to go through than that which he considered to be the sole object of his exertions, the *summum bonum* of his expectations. I wish to impress upon you the importance of studying your profession for its own sake, not merely for the purpose of procuring a qualification, but in order to obtain that amount of solid information which will best secure the benefits of your privilege, and which is the surest aid to your future success in practice.

For such a purpose there is no short road to knowledge; time and perseverance are both required; but the student who applies himself zealously to those sciences that are successively brought before him, has a rich reward in the increasing extent of his information, and in the pleasure which such studies cannot fail to afford him. In patiently observing disease also, he treasures up a still more valuable store of practical knowledge upon which he can with confidence rest his hopes for the future. His qualification to practise is obtained as a matter of course; but the medical student should always bear in mind that the public, not his examiners, are to be his ultimate judges. His successful examination is only an auspicious omen for the future, but does not insure success in practice. If this flattering test be not confirmed by further proofs of a competent medical education, it becomes of little value to its possessor, and reflects most mischievously on the profession to which he belongs. If the student in medicine would observe the career of his fellow-student in law, he might perhaps better perceive the force of these observations. Although this candidate for public favour has at present only to go through the more agreeable curriculum of public dinners—has no examination to fear—nevertheless no student knows better the necessity for constant, persevering, incessant exertions, none labour more assiduously for their ultimate reward, no student would more quickly perceive the absurdity of attempting to learn law by "summary process." It is true that he has to undergo a more accurate public criterion; the first trial in which he is prominently engaged may be the test by which he is to rise or fall: the anticipation therefore of such an ordeal may be a powerful stimulus to exertion. But let not the medical student fancy that his is a different case; it may be precisely similar, or his trial may be delayed. It is possible that in the first case he attends, in several of his early cases, nature may assist in concealing his ignorance, success may encourage false hopes, and give him a confidence amounting to presumption, but the day of retribution may sooner or later arrive in which his incompetency is made evident, and his professional character is lost.

It is my duty, therefore, to caution you against an error which might lead to such a result, and to warn you against the false impression that the ultimate object of your medical studies is merely to pass an examination. While I would dissuade you also from seeking to learn medicine by short methods, I mean not to depreciate the value of a well-regulated catechetical instruction. On the contrary, I look upon it to be a most efficient means of guiding the young student through many temporary difficulties that obstruct his path, and, by directing him in the proper course to pursue, enables him to economise the valuable hours that he is devoting to the study of his profession.

Abstract study is another error which the medical student should avoid; I mean, indulging too much in the habit of abstracting his attention from surrounding objects, and seeking to gather from books that knowledge which can alone be derived from a close observation of nature. Medicine is not an abstract science, nor can it be learned in the closet; the best descriptions that books can give are only auxiliary to the evidence of the senses; you must see in order to know, and then a good elementary work is invaluable in sharpening your perception. Medicine is the science of observation, and in order to cultivate it successfully your observing faculties must be strengthened and improved. The elementary sciences of medicine are well calculated for such a purpose; botany, chemistry, and anatomy, afford an extensive and ever-varying range of objects to improve them: when they are thus trained disease presents a wide field for their exercise, but one much more difficult properly to cultivate. In clinical observation it is necessary not only to note the symptoms which present themselves, but also to determine through them the disease that is their immediate cause; the connection, however, between the cause and the effect is seldom apparent, and hence the clinical study of disease requires a constant and patient attention.

Clinical medicine may be considered in two points of view. In one sense the leading symptoms of the disorder are recognised and remembered, while many of those which are subordinate are unnoticed; when habit improves this kind of observation the practitioner almost intuitively makes a correct diagnosis, although it is possible that he might not be able to explain clearly the grounds of his opinion; nay, if he were to analyse the collection of symptoms that led him to form it, like analysing the features of the face, he would lose the expression. In this aspect, a single symptom, or the collection of several symptoms, may form the diagnostic feature of the disease which the experienced observer is quick to perceive, and by which he recognises its character.

In another point of view the whole series of symptoms are equally noticed, the history of the patient both in health and disease recorded, and if death take place every post-mortem appearance is registered, whether caused by the existing malady or otherwise. In the former method the physician confines his attention to the case immediately before him. In this it is considered as only one of a numerous series of facts that he desires to compare and connect together for the purpose of determining the essential character of the derangement; it is only one of many evidences by which he hopes to establish important general conclusions, a single item in the statistical analysis of the disease. Success in the first mode of observation must ultimately render the student an experienced practitioner. The accumulated information collected by the second forms a solid basis for the reputation of the scientific physician. The latter method of study is that which you would naturally select; but you must not be deceived in what you undertake; it is by far the most difficult, requiring infinite patience, constant attention, and great caution in pursuing it.

You must be content for a long time with merely recording and comparing facts, without attempting to derive from them any general conclusions; your duty is rather to determine the *accuracy of the fact than the certainty of the inference to which it seems* to lead, nor can any conclusion be safely asserted until a large collection of such facts have been made, and the probability of error is diminished by the constant repetition of the same phenomena in connection with the same apparent cause. You perceive, therefore, that such mode of investigation needs great patience, and also requires extensive opportunities for observation. Consequently the distinguished reputation which is the reward of its successful cultivation has been attained only by a few, and, even among these, the eminence which they have reached is only comparative; very far removed above the crowd that is below them, but still very far short of the height to which the scientific physician may yet attain. Hence, also, these different methods of clinical observation present very different results. We find many experienced practitioners in the present age, and but few truly scientific physicians. Let not this, however, discourage you, but rather take the brightest example as that which is the best to follow. In your efforts for distinction, although you may not be able to gain the point which is the object of your ambition, still you must rise higher and approach nearer to it than before the attempt.

"Est quâdam prodire tenus, si non detur ultra."

Whichever of these methods is adopted it necessary to acquire *the habit of observation*, which can only be done by correcting our too common habit of not observing; our disposition to abstract thought, the extreme of which becomes absence of mind—you may have eyes, and see not. This is best done by the practice of noting your observations, either mentally, so as to record them afterwards, or at the bedside of the patient. The latter plan is, of course, more accurate, but the former is not without some advantages. In order to retain your impressions of disease for the purpose of recording them, your attention must be more fixed upon them; they must be engraved a little deeper on the mind, and consequently are not so soon lost. Thus it is easier to compare the symptoms of a new case with these previous impressions.

Your first attempts to take notes of disease may be very imperfect, so far as the complaint is concerned, but are most valuable in training your mind to attention. Your early essays may be very useless records of disease—redundant with superfluities, deficient in important facts—but they are the lessons which enable you to produce a more perfect observation, and without which you can never succeed in avoiding mistakes. Thus by a steady practice you will find these difficulties diminish, your attention much more alive to what is before you, your eye more acute, your habit of abstraction less.

These remarks on the only successful method of acquiring a knowledge of disease naturally lead me to point out another error that is frequently committed, and which it is very necessary to avoid.

Theorizing on a few facts is a fault of every-day occurrence. Nothing is so difficult as the scientific investigation of disease; nothing more easy than to support by arguments any proposition respecting it. A very few facts are often sufficient to give the appearance of truth to a very general inference, because no contrary facts may then be known to disprove it: hence this illogical mode of reasoning, stimulated by a craving for novelties, too frequently leads to hasty and incorrect conclusions—too often tempts the practitioner to publish his crude and ill-digested opinions with a boldness, and to defend them with an obstinacy, that should only belong to truth. His erroneous statements, however, are ultimately discovered and denied, but his opinions have gone before the world, and few are willing to acknowledge their mistakes: thus controversy springs up, and such a flood of discordant opinions rushes into the current of our professional literature, that the eddying torrent only stirs up the long settled refuse of bygone discussions — acrimony again makes muddy the stream, and completely obscures the truth. I am anxious, therefore, to caution you against an error of this kind, and to recal to your attention, that in medicine, even more than in other subjects, "one fact is worth a thousand arguments:" but these facts must be accurate, and you must exercise great discrimination in determining them. There are many assumed facts floating on the surface of our medical literature, which are very delusive, and conceal from us the truth. Hence it is necessary to guard against false assumptions.

Assumed facts are generally dependent upon some deficiency in our powers of observation. The prominent symptoms of a disorder are seldom mistaken, the sanative effects of a remedy in a given case may be ascertained with tolerable correctness; but when we go further than this, and profess to trace all the effects that the disease produces on the constitution, or would apply the remedy more generally to other diseases presenting similar symptoms, then commences the confusion produced by misstated facts.

Morbid anatomy supplies us with abundant examples of this kind. In the age of the eminent Baillie very little attention had been given to pathology: post-mortem inspections were not sought for: the practitioner had decided on the cause of death in a different manner; post-mortem appearances could not assist, and might possibly confuse his ideas. The researches of Baillie produced a change; these examinations were more frequent, and then the cause of death was sure to be discovered in the appearances presented: a discoloured liver a congested lung, effusion into the ser cavities, were convenient explanations: a florid patal was inflammation, a tuberculous cavity an ulcer. All these causes of death were boldly announced. More lately, however, many appearances then attributed to disease were found to result from natural causes, and, as pathology improved, "pseudo-morbid appearances" were pointed out to the practitioner, who then became more cautious, and was more desirous to accustom his eye to true morbid alterations; but during the interval that this change was taking place, the pathological causes of disease were assigned without the slightest hesitation, and thus were promulgated a multitude of assumed facts, the mistakes of the uneducated eye.

Microscopic observation in the present day is not unlike what necropsy had been in the past. It is new, it is not yet sufficiently understood, it is still more liable to optical deceptions, and thus may be a fruitful source of the same fatal error—assumed facts. We have yet before us the announcement of "pseudo-microscopic appearances," which is sure to arrive to correct our errors and bring us nearer the truth. We cannot now appreciate the influence which this powerful and important agent may exert on the science of pathology. We can perceive in the study of the microscope the elements of a revolution in our notions of disease which may ultimately produce an important change in the study of medicine, but in the present state of our microscopic education too much caution cannot be exercised in founding any conclusions on the molecules revealed by this valuable instrument. In descriptions of disease, and the operations of remedies, many other instances of which might be called *false facts* could be adduced, but the obvious examples that have been quoted I would hope are sufficient to teach you a lesson of caution in assuming as facts what appear to be facts.

Thus far I have directed your attention to the study of medicine generally: permit me now very briefly to allude to more special subjects—to the branches that spring from it, which require equally the support of a sound medical education—to *surgery* and *midwifery*. A medical education is essential to surgery, otherwise many skilful operations would be most uselessly performed. But in addition to the general acquirements necessary to the knowledge of medicine, surgery needs a still higher cultivation of the sentient faculties. Not only must the eye be acute, but the fingers adroit; you must teach the hand as well as instruct the head, and, to do so efficiently, the hand must be constantly exercised: a persevering practice in the use of the scapel is necessary before you can venture to perform any of those operations which in the present day reflect so much honour on surgery. I think it right to point this out to you more particularly, because, in the present improved state of engraving, when accurate plates and the most finished wood-cuts abound, there is the stronger temptation to trust to them for obtaining a competent acquaintance with practical anatomy: these plates, accompanied by equally graphic descriptions given in the most popular elementary works on descriptive anatomy, might appear to be quite adequate for the purpose: but such is not the case: the fingers must be educated to what they have to perform. There are many things quite easy to do, when the habit is acquired, which otherwise would be impossible. All works of art in which the hand is engaged illustrate observation. No painter ever became an artist by studying dissertations on painting. No player on instruments ever rose to the rank of a musician by reading descriptions of music. It is the same with surgery; the habit of dissection must be acquired in order to operate successfully. An intuitive facility is gained by practice which the most diligent study can never communicate. Will you pardon a very homely, but perhaps not an inapt, illustration of my meaning? Many of you can, no doubt, recal the impressions produced by your first entrance into this great metropolis. Possibly you may have looked in dismay on the labyrinth of streets which surrounded you on every side; in your anxiety you purchased a map of London, and studied it with infinite diligence: you traced the great leading arteries of streets through their endless ramifications, and imagined you knew the anatomy of London. But the first practical essay you made, the first time you ventured out of the leading thoroughfares into the tortuous bye-ways, you found, by most perplexing evidence, that you knew nothing at all about it. Compare these recollections with the facility with which you can now move from point to point without the slightest mental exertion, and you will understand the intuitive knowledge that habit alone can give. Such is the knowledge that surgery requires, and such is the practical education you should seek to obtain before you presume to practise it. It is the more necessary to press this on your attention, because your examination for the license to practise seldom removes the delution you may be under; at least I have known the most vivid and accurate descriptions of surgical operations *given by fellow-students who could not go through a single* step of the dissection they so well described.

Time will only permit me to say a very few words on that branch of medicine with which I am most familiar. I would willingly enter more at length on this subject; I would gladly offer an apology for *Midwifery*, and endeavour, to the best of my ability, to shelter her from the rather uncivil treatment which (Cinderella-like) she sometimes receives from her haughty sisters; but I must leave this to you, and trust that, when your attention is drawn to this branch of your profession, you will find that it merits a higher estimation than is generally given to it. Obstetric medicine is depreciated, because it is that branch of medical practice in which ignorance and presumption run the least risk of being exposed. We are not inclined to think a scientific education necessary to a branch of the profession which may be practised by the most unscientific old woman. Hence has arisen an error almost fatal to midwifery—that, because it is easily practised, it needs little attention. I should, on the contrary, advance this fact as the best argument why it should receive much more attention than is generally given to it. This facility only arises from the circumstance that parturition is a natural process, and nature generally succeeds in safely completing her work. So long, therefore, as there is no interruption to her operations, the obstetrician is but a passive observer, who is only called upon to interfere when that interruption takes place. But when danger presents itself—*and danger may be instantaneous*—when the life or death of his patient is dependent solely upon his promptitude and skill,—in these instances his hour of trial arrives,—it is then that the uneducated practitioner would bitterly repent the error he committed in giving a negligent attention to midwifery. For proofs of this, I need only refer you to the medical periodicals. In these you will find cases recorded in which mothers have been lost to their husbands and children through the grossest ignorance,—cases of fatal hæmorrhage, which might have been prevented,—cases where the womb had been ruptured by an awkward operator,—nay, where it has been actually torn from its attachments, in mistake for the placenta. These blunders are too serious to be trifled with,—too dangerous to allow me to yield to the false impression which I am sorry to say has been too much encouraged—the belief that obstetric medicine does not demand the same scientific attention as the other branches of medical science. To this assertion I would simply reply: it is true, or, it is false. If true,—if a scientific education be not necessary,—if nature be adequate to all purposes,—there are many and strong reasons why the gratuitous office of an accoucheur should be altogether dispensed with; there are powerful motives why we should entrust the parturient woman to the attentions of her own sex. But, if the proposition be not true,—if one of the evils of civilisation be, that nature is not always competent to her task,—if skill and intelligence be required for the patient's safety,—then I must insist that a necessity for a sound and scientific education is called for in obstetrics even more than in medicine or surgery. The latter have a protection that midwifery is deprived of. Every case that the physician or surgeon attends is a kind of *experimentum crucis* of his knowledge, and therefore there is less danger of ignorance being successful; but in midwifery the incompetency of the practitioner may for a long time be disguised by his presumption, until some accident makes a frightful and a melancholy exposure of his inefficiency. It is the duty of those who preside over medical education to use means adequate for securing a competent attention to obstetric medicine. It is my duty to urge upon you—at least upon such of you as intend to practise this branch of medicine—the importance of a sound obstetric education, and to warn you against the danger of believing that there is little to learn in midwifery.

I have now, gentlemen, given you a slight, and, I admit, only a very imperfect sketch of the profession you have selected. I have been desirous of proving to you its scientific character, and I have ventured to point out some deficiencies which seem to me to exert an influence most injurious to the rank which medicine ought to maintain. Some of these it is in your power to correct; and, in order to aid you in so desirable an object, I felt it my duty to caution you against some very prevalent errors that are mischievous to the study of medicine. I would fain excite in your minds a zeal in its pursuit; but it must be "a zeal according to knowledge."

Allow me, in conclusion, to hope that my object may be accomplished,—that your well-directed diligence will be followed by gratifying results,—that every succeeding year may produce a larger addition of well-educated and scientific members to our profession, until their rapidly increasing numbers and high intellectual attainments secure to medicine its proper and honourable position. I would also indulge in the pleasing anticipation that your own industry, and the exertions of my colleagues, will not be without their reward,—that your future career will be commensurate to your present expectations, and, when your brightest hopes are realised,—when an honourable position has been secured, and you can review the steps by which it has been attained,—that then you will look back with no unpleasing recollection to the seat of your medical education.—

"Forsan et hæc, olien memorcisse juvabit."

BELLADONNA IN STRANGULATED HERNIA.

BY DR. G. B. DE BORSA, OF VERONA.

Before I was accustomed to apply belladonna I resorted to the operation for the relief of strangulated hernia much more frequently than I do now. I am now able to enumerate, both in my hospital and private practice, a long series of cases in which the reduction of the hernia by the taxis, aided by this medicament, has been accomplished. I will not endeavour to explain the manner in which it acts upon the protruded or neighbouring parts, for I can only hazard hypotheses; I will not say with some that it relaxes the tendon of the external oblique and the internal ring, as it expands the pupil, but will confine myself to the indisputable fact, that since I have employed the belladonna I much oftener succeed in reducing the hernia without having recourse to the knife.

I employ this formula: ℞ Ext. Belladon. ʒij; Axung. ℥ij. M. bene. I anoint the tumor at least every half hour. After a while, the pain, and then the tension of the sac, diminish, and the possibility of reducing the hernia by the taxis occurs. The various other means usually employed, as bleeding, baths, cold, tobacco, &c. are not to be neglected; and although these will frequently not succeed alone, they will do so in many cases when aided by the belladonna.—*Med.-Chir. Review*, quoted from *De Borsa's Saggi di Chirurgia Teorico-Pratica.*

TREATMENT OF URINARY FISTULÆ.

Dr. Bresciani de Borsa states that he has tried the plan of leaving a catheter in the bladder, and that of allowing the urine to pass along the canal; but finds there are strong objections to both. The constant presence of a catheter induces chronic cystitis, inflammation of the neck of the bladder, or even a fistula of that organ. On the other hand, left to itself, the urine prevents the union of the edges of the fistulous opening. A mixed method is the best, and this consists in passing, the instant the urgency for voiding urine is felt, a conical silver catheter cut off at the end, so as to leave the apex open, and thus withdraw the urine from the bladder without allowing it to come in contact with the fistula, and yet avoid the dangers consequent upon the retention of the instrument in the bladder.—*Med.-Chir. Review.*

RODUCTORY LECTURE,

, *October* 1*st*, *at the Opening of the*
:al School of Guy's Hospital,
for the Session 1846-7,

,DING BIRD, A.M. M.D. F.R.S.
of the Royal College of Physicians.

EN,—It has fallen to my lot, at
encement of a new medical year,
nt my colleagues, and, in their
d my own, to bid you a hearty
o these walls. Our acquaintance
: of you commences to-day, and
ng must be regarded as an earnest
cere anxiety we shall feel in your
nd of the warm aspirations we
r your success in the career you
menced. I venture to hope that,
er a short time, we shall have
tter acquainted in our respective
of teachers and pupils, you will
ur zeal in your behalf will prove
ood wishes I now utter to you are
: regarded as unmeaning expres-

resence in this theatre sufficiently
at you have made up your minds
ice of a profession: a choice upon
ope you have well pondered, and
I trust each day's subsequent
: will shew you have a due voca-
the majority of those now as-
the scenes around them are new,
ing, probably, left the comparative
country life, or the limited circle
incial town, to become, for the
, the denizens of this great me-
Not being stimulated to this visit
itement of idle curiosity, but with
laudable desire—the wiser purpose
iring here an acquaintance with the
and practice of the important
of which you all hope to become
l honourable members.

re is another class occupying seats
enches to whom also I have hearty
n extending the warmest welcome.
er to such of you who are older
aces, and who, in the preceding
ave been members of this school,
w returned with, I hope, renewed
d vigour, to a re-union with the
mpanions of their toils. You,
, will, I feel confident, continue to
r in the esteem of your teachers
you continue to labour amongst
re with pleasure take the industry,
and zeal exhibited by you last
n augury of your success during
session. To your *example* we would, with pride and gratification, point as models for imitation on the part of your junior brethren.

But it is to the "fresh-men,"—to those who for the first time are assembled within these walls, who make their first appearance in the character of medical students,—that my remarks must be chiefly addressed; and I must beg their attention whilst I attempt to sketch the course and nature of the studies to which they will from this hour have to devote themselves, and of the influence of such pursuits upon their future positions in life.

You come here, gentlemen, having each received what is termed a liberal education; and, before I make a remark on any other subject, let me beg of you most earnestly to take the greatest care that the acquirements you now possess be never permitted to become diminished by carelessness or rusted by neglect. Believe me, the possession of a sound classical and mathematical preliminary education is essential to your attaining a satisfactory position in your profession; for let me assure you that, although it is perfectly true that a man may treat disease without being able to read Hippocrates or Celsus in their respective tongues, or to reduce a dislocation without knowing anything of the mathematical laws governing the application of mechanical force, yet, however good a practical physician or surgeon such a man may possibly become, depend upon it, the general voice of the public will not decree him the rank which every member of the profession of physic ought to attain—that of an accomplished gentleman.

There is, however, a portion of your preliminary education too frequently neglected, one which I venture to assert is absolutely essential to you, if you wish to become distinguished or even competent practitioners. I refer to an acquaintance with the modern languages, but especially of French and German. These constitute the two great keys by which you will be able to unlock the vast stores of information daily issuing from the medical press of the Continent, and, without the command of which, such information must be for ever lost to you, or slowly and imperfectly acquired through the tardy aid of translation. I always feel that a student ignorant of these languages may be compared to a treasure-seeker standing over a gold mine, the precious contents of which he cannot reach, for want of a spade and mattock to dig them up. Of French, I presume you all have a fair acquaintance; a very little trouble ought at any time to make you capable of reading with facility any prose work in this really very intelligible and easily-acquired language. German is, I deeply regret, much less generally read, but so essential is it to every one who may subsequently devote himself to original researches, or become an industrious cultivator or teacher of his profession, that I advise all of you who have hitherto neglected this language to take the earliest opportunity of making yourselves acquainted with it. Discouraging as is its appearance to the uninitiated on first casting a glance over the pages of a German work, let me assure you it is by no means a difficult language to read with at least tolerable fluency; and any one gifted with a good memory, by devoting a few hours in the week to its study, will be able in a few months to decipher, with great care, any paper on a professional subject. This exercise may form a valuable and agreeable pastime after the more scientific studies of the day.

I feel sure that one of the reasons which renders our profession less brilliant in the eyes of aspirants than the sister faculties of divinity and jurisprudence, is the fact of its not holding so elevated a comparative rank in the estimation of the public. As a general rule, we are all more apt to judge of the excellence and dignity of any calling rather by the acquirements of its particular members than by the abstract rank which is conventionally accorded to it. Medicine, you will recollect, is one of what are termed learned professions, and rightly so named. The possession of a gentlemanly education of a liberal character is really, then, an essential and indispensable title to admission within our ranks; and every member of it not possessing this qualification, or affecting to despise such acquirements, must be regarded as an intruder within our camp, and not likely to elevate our calling in the estimation of the public, who, as a body, are generally ready to esteem learning in those who possess it. The neglect of such attainments, the fact of their being for a long time not rendered imperative, excepting on those entering the highest rank of our profession, has undoubtedly been one of the causes which has helped to degrade somewhat our originally high standing. It is, gentlemen, reserved for you to remove this stain. From the Young England of our profession we expect much. You commence your studies with advantages to which your predecessors were strangers; and we feel confident, that not only are you anxious to be reputable practitioners, but cultivaters of our science, and not to be of that number to which the stigma has been affixed that they had crawled from their cradles to their graves, having done nothing for that profession which had done everything for them. On commencing any pursuit in life, every man ought to feel that he owes it a debt, in return for its giving him a station and a means of support, competence, and, perhaps, of fortune. He is bound to evince his gratitude by the most conscientious attention to its interests, as well as by extending its domains, and throwing his mite into the treasury. In the preface to his work on English law, Lord Bacon, some two and a half centuries ago, well alluded to this duty. He says, "I hold every man a debtor to his profession, from which, as men of course do seek to receive countenance and profit, so ought they, of duty, to endeavour themselves, by way of amends, to be a help and ornament thereunto. This is performed in some degree by the honest and liberal practice of a profession, when men shall carry a respect not to descend into any course that is corrupt and unworthy thereof, and preserve themselves free from the abuses wherewith the same profession is noted to be infected."

Having made these preliminary remarks, which appeared to me essentially called for in the present state of medical science, I shall now endeavour to lay before you a brief sketch of the relation borne by the learned professions to each other, and of the system of study required to become acquainted with that you have chosen.

Even in the earliest history of our race, from the first period when men began to form themselves into social communities, united by a common interest, some trace of what were subsequently dignified as the learned professions may be met with. The first burst of pure and grateful feeling which sprang from the hearts of the earliest inhabitants of the earth, when contemplating the wondrous works around them, must have taught them to regard their devotion to their Creator as imperative, and to carry with it the necessity of teaching the practice of this duty to their offspring and dependents; and thus, under the simple and mild rule of the patriarchs, each the absolute monarch of a tribe which owned him as its parent, the father was the sacred teacher. But soon, indeed, even in the earlier ages, the minds of men became alienated from these pious duties,—the influence of fierce and conflicting passions, of mercenary and selfish interests, of invidious and often impious schemes of self-aggrandizement, were felt. Hence the necessity was soon admitted of setting apart a body of men especially devoted to the service of the Creator, whose pleasing task would be the teaching their fellow-men the duties they owe to God and to each other, of pointing out the folly and vanity of most of the allurements of the world, and of directing them to a nobler ambition—that of appearing pure and spotless before the throne of Omniscience. Hence the first profession, that of divinity, was, by the tacit consent of all, set apart, and has ever, as now, ranked above every human institution, as in importance and serious value it infinitely transcends all other of the engagements of life. For a long period the teacher of religion was the universal lawgiver; the judge and the priest were identified in the same individual; but as time rolled on, as interests became multiplied, as man too frequently lived at the expense of his fellow-man, the ministers of a merciful Deity were ill fitted to deal with the selfish passions and cunning of the criminal oppressor, or to hurl with unsparing hand the fulminations of a necessarily stern code of human justice on the offender. At length the framer and teacher of the laws necessary alike to the existence of social bodies and of the well-being of the commonwealth, was in most countries separated from the priest, and regarded as the representative of a new profession, inferior to divinity, inasmuch as the duty which man owes to his neighbour is inferior to the homage he owes his Creator,—but still superior to others, in consequence of its being essential to the checking of crime, and affording a weapon of defence alike to the poor and powerless, as to the wealthy and the great.

These two great professions, the one teaching man his path in this world, the other pointing out his course towards the next, were all that were essential to his well-being so long as he remained free from the inroads of disease or effects of accident. But with the fall of our first parents came death into the world, and with it its companion, disease. The human machine, so perfect in its parts, so complete in its structure, that its destruction save by external violence could scarcely have been anticipated, is liable to a multitude of diseases; and these, whether depending upon accidental causes, or produced by the wear and tear of the body from exertion, or from the friction of mind on matter by mental anxiety and distress, clog its action, interfere with the performance of its duties, and eventually stop it altogether; the chain of life sometimes suddenly snapping asunder; at others, gradually loosening its hold on earth link by link, until the mortal frame-work sinks to its kindred dust, and the undying spirit ascends to eternity.

To interpose a shield between the lethal influences of external agents and the body, to blunt the arrow when its aim cannot be averted, to soothe the pangs of disease, and lull the agony of the wandering mind, was first the duty of the divine, and so continued in this country through the middle ages; but at length the third of the professions was erected, and medicine was almost universally recognised as a distinct and definite pursuit.

Of these three *professions—divinity, law,* and physic—you, gentlemen, have chosen the latter, and as such will become useful and respected members of the body politic of your country.

Before directing his troops to the defence of a stronghold against the attacks of an enemy, the skilful general acquaints himself with all its approaches and defences, its strong and vulnerable points: so, in like manner, before you can hope to defend the human body from disease, or direct your weapons to its removal, it is absolutely necessary for you to become completely acquainted with its structure, and to make yourselves thoroughly conversant with the nature and character of all its endowments and functions. Hence, gentlemen, let me impress upon you the serious and imperative necessity there exists for a perfect acquaintance with the structure of the healthy body, as taught by the science of anatomy. To this science, whatever may be the rank you may be eventually called upon to occupy in your profession, the utmost attention should be devoted, not merely by oral instructions in the theatre, but by a constant and patient attendance in the dissecting room, and tracing the structure of the body by the scalpel. In this way you will discover that the body is made up of a great and bony frame-work, held together by tenacious structures termed ligaments; these bones being clothed with certain contractile organs termed muscles, the motor organs of the structure; these are nourished by blood conveyed through tubes termed arteries; and after depositing as much nutritious material as is sufficient for the wear and tear of the body, is returned to the centre of the circulation, the heart, through another series of tubes, the veins. The blood whilst performing this duty becomes loaded with certain impurities, or effete elements, which, if retained, would interfere with the well-being of the body, and are therefore eliminated from the circulating mass by means of certain secerning or separating organs, of which the lungs in the chest, the liver and kidneys in the abdomen, with the addition of the cutaneous covering of the body, constitute the chief. To supply the machine thus constituted with the means of repair when injured, and to afford a pabulum for its growth and nourishment, various products of the animal and vegetable kingdoms, under the generic term of *food*, are taken in by the mouth, and reaching the stomach, are converted partly into the crude elements of the blood which enter the circulation, and partly into certain exhausted and useless matters which are expelled from the body. To endow this machine with motion, with the power of bringing itself into relation with the external world, another function is necessary; and accordingly the wondrous structure and marvellous agency of the nervous system is developed in the body. This consists of, *first*, the organic system, under the influence of which nourishment, growth, and secretion go on; *next*, of the nerves of sensation and voluntary motion, and their appendages, under the agency of which the body acquires the faculty of motion, and the endowment of the senses; and *thirdly*, of the great central mass or brain, locked up in the bony cavity of the skull, the seat of intelligence, the bond of union which unites with the finite and perishable structure of the body—the "divinæ particulæ auræ," the particles of the divine essence, constituting the wondrous mind. Thus formed and thus endowed, the human organism is complete, and requires only the breath of life to be breathed into its nostrils to render it a moving, sentient, responsible being, the wonder of its fellow-beings, and the masterpiece of its Creator.

The laws governing the existence, growth, conservation, and reproduction of the being, must next engage your attention; and the laws of life, as taught by the beautiful and attractive science of physiology, must be impressed upon your minds in the lecture-room, reflected upon in the closet, and tested in your future experience.

Thus, having fairly entered the avenues of the temple of medical science, you must direct your attention, still unwearied, to certain other collateral branches of knowledge ere you presume to enter its penetralia, or try to raise the veil of obscurity shrouding the more complete knowledge of your profession. Above all, let the fairy science of chemistry demand a great share of attention. I need not hold out inducements to its study and cultivation, for so fascinating is it in character, so valuable the information it affords, so vast its resources, and so powerful as an instrument of research, that it imperatively impresses itself upon you by an attraction as irresistible as persistent. By the light of this science you will be taught the mode in which atom unites with atom to form a mass, and how, under the influence of a few intelligible and recognised laws, four simple elements may be combined and mutually arranged, so as to give rise to the formation of an infinite series of products, distinct in their characters, forms, and effects. It moreover puts you in possession of the key to the formation of many of the most valued and trustworthy weapons against the inroads of disease; and if we may trust the results of recent researches, if the light now faintly shining upon us be really the beams of true science, and not the fitful gleams of the *ignis fatui* of hasty and imperfect induction, *we may hope* to look to chemistry as doing *something* more than any other branch of human science has yet effected; it bids fair now, indeed, to penetrate the dark obscurity enveloping the formation of the various secretions of the animal economy, and to lay bare before you the secrets of that mystic laboratory, where moving sentient beings are the results, and life the presiding chemist!

Whilst devoting your attention to the sciences to which I have alluded—whilst anatomy, physiology, and chemistry extend claims to your attention which it is imperative to obey—forget not the sister sciences; but more especially let me impress upon you the necessity of an intimate acquaintance with the nature and structure of the lower organisms; and in the study of the vegetable you will be taught to recognise many of the boasted attributes of man. Botany is no longer a science of names; it leads us to investigate the knowledge of things, and will teach you that the power by which an animated being lives, grows, secretes, and is reproduced, is common alike to man and the most insignificant herb; that there is a form of vegetative or organic life shared alike by the first link in the chain of creation with the last; and equally necessary to the existence of the human race, as of the humble moss which scarcely affords a covering to the alpine rock, or of the lofty pine which hides its soaring summit in the clouds. Thus, by studying the phenomena of life in the plant, you will be the better enabled to comprehend functions when provided with the more complex attributes in which we find them enveloped in the breathing animal. Let me therefore beg of you early in your careers as students, to become conversant with this often too much neglected study; and believe me, that the result will be an acquisition of knowledge delightful in its details, and valuable in its application.

Having thus become acquainted with the phenomena of the vital actions as they occur in a state of health, and rendered yourselves familiar with the functions of the body whilst animated with the flame of life, you will be prepared to investigate their peculiarities when under the influence of disease, when the vital spark but faintly gleams, and seems about to be for ever extinguished, as in ailments of enervation, depression, and exhaustion; or when it bursts forth into a vivid and lurid glare, lighting up in our frames the flames of fever, and even attacking the mind itself (that link which connects us with an higher state of being), mocking its supremacy with the delusions of mania, or the fitful paroxysms of phrensy. And in this stage of your studies you will encounter a truth equally unexpected and wonderful, that not only are the healthy functions of the body carried on in obedience to fixed and definite laws, but that even the departures from health are similarly governed, and that each of the inroads of disease by which the powers of the body are sapped, and under the influence of which we are hurried to the grave, is regulated by a law as fixed and immutable as that by which the earth moves in its destined course through space, and the planets retained in their spheres. Aided by this remarkable fact, you will find the acquisition of pathological knowledge much more ready than from the apparently multifarious form of diseased action could have been supposed, and you will find that, when once taught to recognise the first stadia of disease, the cause and result can generally be readily predicted and pointed out. But, gentlemen, remember that to you abstract science is unprofitable; interesting as it may be, it will turn to nought but dust and ashes in your grasp, unless you learn to apply it: hence to you, as practitioners of our art, pathology is alone valuable when connected with the diagnosis and alleviation of disease; and it is by being enabled to point out the relation existing between the symptoms presented by the patient, or discovered by physical signs, and the morbid changes experienced by the organ or function involved, that the experienced and scientific physician is distinguished above his less accomplished brethren. This science, then, will lead you to the inmost recesses of the Esculapian fabric—the detection of disease, and the directing your measures towards its arrest or cure; constituting the subject of the lectures on the practice of medicine. In this important part of your studies you will be taught the relation existing between diseased action and resultant symptoms, and thus you will learn to detect the lurking seeds of consumption beneath the dazzling eye of beauty and the hue of health—to discover the elements of early malignant degeneration in the sallow complexion of one who is scarcely conscious of an ailment—to elicit the ravages of fearful lung disease, when not a symptom perchance exists save those afforded by physical signs, and unaided by which the miserable patient would be on the verge of the grave, before even a suspicion of the existence of an incurable disease in a vital organ had been suspected by the anxious friends of the patient. Here in many instances will your chemical knowledge afford remarkable assistance; the application of a few reagents to the urine will thus sometimes prove to you, beyond all doubt or question, the presence perhaps of an effete matter circulating in the blood, and threatening the life of the patient by a poison generated in his own body; or, by the presence of a foreign ingredient, enable you to foretel the death of the sufferer by the sudden oppression of dropsical effusion, or the slow but sure descent—the *facilis descensus*—of a wasting diabetes.

In the study of surgery you will learn how to remove by the knife that which baffles the science of medicine, to afford instrumental aid, or manual interference, when such is rendered necessary by accident or disease. In the practice of this part of your duties, a call will often be made upon you for promptitude of action and great moral courage; for often, as surgeons, you will be called upon to interfere where a minute's unnecessary delay would be purchased at the expense of a life. The perfect knowledge of anatomy is here essential, for who could dare to thrust a knife into the body of a fellow-creature without being well acquainted with the organs it may penetrate! In the attempted reduction of a dislocation, the proper application of the mechanical powers employed will alone distinguish the surgeon standing by his patient with a view to his relief, from the executioner submitting a criminal to the torture of the rack. Thoroughly acquainted with the structure of the body, the scientific surgeon acquires an amount of confidence which nothing else can give; and the possession of this knowledge constitutes the essential distinction between him and the rash and reckless pretender.

In connection with the diagnosis or detection, and prognosis or divination of the results of disease, you must carefully study its remedial treatment. I need not tell you that the knowledge of the symptoms and effects of disease can be but of little avail, unless they lead to a rational plan of cure; and it is useless to know that a foe is in ambush, or in open array before you, unless your knowledge goes a step further, and teaches you how to repel him. This important knowledge will be laid before you in the lectures on therapeutics; this science will bring you acquainted with the resources you have at command to oppose the attacks of disease, or to limit when you cannot entirely prevent its ravages. To understand this subject properly, you will have to make a call on your acquaintance with anatomy and physiology to appreciate the normal state of the organ involved,—with pathology, to understand the progress and results of disease,—and with chemistry and botany, to learn where to find the crude materials, and how to forge the weapons necessary to enable you to combat successfully, or ward off, the threatening peril from your patient.

Besides the duty of self-preservation, common to all, another task devolves upon the females of our race, the production and preservation of their offspring, when, in accordance with the Almighty fiat, "in sorrow thou shalt bring forth children," the woman is lying in the extremity of agony during the trying hours which precede and accompany the birth of a new being. Here will your aid be often called in. It will then be your duty to stand as sentinels, ever on the watch, to avert peril alike from the mother and infant, and, in the hour of anguish, when pain seems too great for human endurance, when every feeling save that of intense suffering is forgotten, the eye of her who is about to become a mother will rest alone upon you as her protector, and she reposes an intensity of confidence in your skill, humanity, and judgment, which nothing else can justify.

Your duties, however, end not here. There is in the field of science a certain tract common to the sister professions of law and physic, and, as medical jurists, you will be called upon to interfere in a class of cases of peculiar difficulty and importance. I refer to those in which the resources of your medical knowledge are called in to determine the serious questions connected with public health or hygiene, or to detect the secret poisoner and assassin. To this serious subject your attention will be directed by one to whom the rank of being the highest authority on forensic medicine in the kingdom is universally conceded. Never let it be erased from the minds of any of you, that oft-times must the evidence, which in a court of justice shall save the accused, or condemn the wretched criminal to condign punishment, be entirely in your hands, and a neglect of the means which a knowledge of forensic medicine places at your disposal may cause you to incur the awful responsibility of the unjust sacrifice of a fellow creature's life, or the scarcely less crime of letting loose upon society a being whose life has been justly demanded by the outraged laws of his country.

Having thus, gentlemen, shadowed forth to you a dim outline of the great superstructure which it remains for you to build up,—having pointed out to you the routine of study which the important duties of your profession, no less than the enactments of the legislature, alike call upon you to pursue, —let me next address a few remarks to you regarding the mode of acquiring the greatest amount of benefit from the oral instructions of your professors.

Let it, then, never be forgotten, that in the lecture-room, however delighted you may feel at the bursts of knowledge which can never fail to illumine the path of the student at the onset of his career, you are to receive such information only as absolutely and perfectly true which admits of positive demonstration; let all else be received as *conventionally* correct, and to be respected as a *valuable guide* to your own researches, its *correctness* being always subject to the touchstone of experience. But never fall into the opposite extreme of bowing before it as before the throne of an idol whose dictates are infallible. Remember the wise remark of the father of inductive philosophy, that hypotheses and theories are useful so long as they serve as sign-posts and guides to our researches; but when they are regarded as idols to bow down to, they become stumbling-blocks in our path. I need hardly tell you, that every thing not admitting of positive demonstration, however it may be sanctioned by the authority of great names, or the sacred influence of antiquity, must of necessity be referred to this category. You must learn to examine facts and statements for yourselves, and, in the quaint language of the great man to whom I have just referred, all "prejudices and idols are solemnly and for ever to be renounced, and the understanding must be thoroughly purged of them; for the kingdom of man, which is founded on the sciences, cannot be entered otherwise than the kingdom of God, that is, in the condition of a little child."

There is, indeed, but one way of studying a profession, which, like that of physic, depends upon observation for its facts, and on experience for its development; and for that we are indebted to the celebrated philosopher whom I have twice quoted, and who has been too truly lauded as the

"Wisest, brightest, meanest of mankind,"

the great Lord Bacon. This distinguished statesman and splendid philosopher, one of the brightest of the luminaries amidst the galaxy of talent adorning the Elizabethan age, has shown that one system of study alone is infallible, and that one is the *inductive*. The essence of this system consists in the patient searching after facts, and carefully accumulating them, until a sufficient number are obtained to warrant our drawing from them general results, termed *inductions*. If a large accumulation of facts lead to the same conclusion, such inductions must be absolutely correct, and we are authorised in receiving them as general laws. If, on the other hand, the inductions drawn from similar observations vary, it is obvious we cannot receive such conclusions as general laws, but must patiently go on accumulating information until we have obtained enough to explain the discrepancies previously obserued. Let, then, from an accumulation of facts, hypotheses or theories be drawn, but never fall into the gross and melancholy error of many who have lived in every age, and dimmed the lustre of the light of science even in our own time, by coining theories first, and then having their facts to look for. In a word, you must *interpret, not anticipcte, nature*; for, as Bacon has well said, "the method of anticipating nature, rash, hasty, and unphilosophical as it is, has nevertheless much greater power to entrap the assent of the mind, which is too apt to be delighted with its own conjectures, and to allow the imagination to be struck and filled with its own plausible subtleties; whereas interpretation of nature, or real truths arrived at by induction, being separately and more slowly collected, cannot so suddenly arrest the mind; and when the conclusions actually arrive, they may so oppose prejudice, and appear so paradoxical, as to be in danger of not being received, notwithstanding the evidence supporting them." This want of caution can alone explain the countenance unhappily given by many men of unquestioned talent and abilities to some of the popular empiricisms of the day: the wretched mummeries of animal magnetism, the senseless puerilities of homœopathy, and the farrago of nonsense which has been published to bolster up the claims of hydropathy, are all instances of this kind, to allude further to which would invest them with a degree of importance as much above their deserts as in the majority of cases it is above the honesty of their professors.

Having, then, seriously made up your minds to judge for yourselves, and to let the inductive system be the web by which you will guide your way through the labyrinth of accumulated experience which it will become our duty to expose to your view,—letting the old adage, that a "cripple in the right path may beat a racer in the wrong," be your motto,—proceed on your studies with a firm but humble confidence, and then, believe me, you cannot fail to acquire an ample and creditable amount of professional information.

Need I tell you that there is no road to the knowledge of our profession perfectly smooth? There are the briars and thorns which, as in every science, obstruct the path and wound the feet of the pilgrim; and there are the *ignes fatui* of delusion, the will-o'-the wisps of preconceived notions and popular *errors*, which serve to entangle the student in his progress. One steady glance at such, aided by the light afforded by cautious observation and induction, will shew at once that, beautiful and fascinating as these delusions may be, they have no better foundation than the vivid imaginations of their authors—scientific cobwebs, fit only to entangle insect minds.

But, you will now inquire, how are you to gain the experience necessary to forming a proper judgment on the accuracy or value of the statements made in the theatre? where are you to find the volume of practical medicine to which our oral instructions stand in the humble relation of index? This knowledge—this great and all-valuable information—*this, the real lore of* our profession—this acquaintance with the penetralia of our science, is within the grasp, is at the command of every industrious student. It is by the bed-side of the patient that you will observe the theories taught in the lecture-room tested by experience. Here you will see those who are your oral teachers in the theatre, demonstrate, in their respective capacities as physicians and surgeons, by their mode of treating disease, the correctness of their doctrines. This union of the lecturer and practitioner in the same person is a necessary element to his success as a public teacher, and immeasurably facilitates the progress of the student.

An affectation of modesty is perhaps as indicative of pride as the blazoning forth of pretensions, and I feel that I am not transgressing the limits of truth, or sacrificing decorum, by expressing my conviction that the system of bed-side or clinical instruction, pursued at this hospital, is most complete. This is not the place or the time for dilating upon the advantages of clinical instruction; at the first meeting of the Clinical Society you will learn more of its value than I can now point out. I may, however, be permitted to say a few words in explanation of the vast means of information afforded by the clinical resources of this great school of medicine. This splendid monument of private benevolence, which annually admits within its walls upwards of 5000 suppliants for relief, and within its portals 50,000, and nightly closes its gates on nearly 600 souls, has, like other similar institutions, its staff of physicians and surgeons, among whom the patients are distributed in accordance with certain regulations. A most important part of your duties will consist in watching their practice, and observing their mode of treating diseases. This, although a source of interest, as well as the result of your routine of duty, becomes but a poor substitute for the more efficient mode of instruction which you must trace out for yourselves in becoming what are termed clinical reporters. This is not an advantage to be possessed but by few, for every student not only *may*, but, if he does his duty, *must* devote a considerable portion of his time to the office of clinical or bed-side reporter. You will, in this character, be called upon to place yourselves by the bed-side of a patient immediately upon his admission, to listen patiently to his tale of suffering, to elicit all the information afforded by his early history, as well as that of the immediate ailment. This account, committed to paper, will be detailed by you to the physician or surgeon to whose practice you are for the time attached. By being thus submitted to his opinion, corrected, perhaps, by his suggestions, as well as by being criticised by the more advanced fellow-students, the history of your case will induce you to think, and an idle and destructive habit of sauntering through the wards is effectually prevented. The reports thus commenced, the reporter will have to follow up until the cure or dismissal of the patient; or, if the disease be one which baffles the resources of medicine or surgery, and end fatally, his duty will not end until the hand-writing of disease disclosed in the dead-house is carefully noticed and faithfully recorded. In the archives of the hospital we have thousands of cases thus recorded, the fruit of the labours of your predecessors, and the number of which you will each in your turn be called upon to increase. There is no royal road to medicine any more than to any other branch of science—labour is a necessary prelude of success; and however great the task I have sketched, you will find yourselves, in its performance, amply rewarded by the acquisition of an amount of experience not to be acquired by any other means, and sufficient to enable you, on entering practice, to take your stand on a level with most, and in advance of many, practitioners, who, although much your seniors, have not had the advantages now placed at your command. In another series of ailments, those devolving upon the surgeon's care, you will be called upon, not merely to report upon, and watch, but even to assist in the treatment, by dressing the wounds, and administering with your own hands all the appliances of the art. Whilst pursuing this part of your studies you will be further initiated into one of the most harassing duties of your profession. Being called upon, in turn, to reside within the walls of the hospital for a week or longer at a time, you will be constantly summoned at all hours from the quiet of study, from your meals, from the repose of your beds, to hasten to the relief of some unhappy sufferer. And here, whilst alleviating the agonies of a fellow-creature, mutilated by accidental violence, sinking from the blow of the assassin, groaning under the distress of a hernia, or senseless from some miserable attempt at self-immolation, you will be schooled alike to the most serious of your future duties, and made fit for those heavy responsibilities when you will have no one to share them with you, and when the life of the being prostrate before you will often depend upon your coolness, precision, and judgment. All these duties involve advantages either nearly unknown a few years ago, or only to be obtained at a heavy pecuniary sacrifice. But do not flatter yourselves that you will quite escape; from you we demand a price for the possession of these advantages, but it is a price which, thanks to the wise arrangements of *the authorities of* this great hospital, is *within the means* of all—one not depending upon the influence of friends, or the possession of wealth. It is, gentlemen, *industry*, patient, persevering, untiring industry. This you can all command; a brilliant talent, which probably falls to the lot of few, is not essential. Desirable as this is, yet without industry it is often a dangerous endowment. It is apt to be *the fire without the sacrifice*, and too often burns out for want of fuel.

I repeat, and am willing to be responsible for the redemption of the pledge I now give, that every pupil of this hospital may, if he please, avail himself of all the advantages I have pointed out; and let no one fear being overlooked or forgotten; for I assure you that the progress of every pupil is well known to the authorities of the hospital, and his character, so far as it is evidenced by diligent attendance in the wards and lecture-rooms, and by studious and correct demeanour, is known to those whose duty it is to apportion out the advantages to which I have alluded. There is as little chance of the idler receiving these rewards as of the industrious man losing them. An idle man can never succeed here, and, unless determined to reform, and work with the industrious student, he will best consult his own interest by not joining our school. These are the necessary and useful results of the system of correct discipline pursued in this place,—a system inseparable from, and essential to, the well-being and successful working of an institution of the magnitude of Guy's Hospital.

I am anxious to impress upon you the fact, that the great feature of the school you have chosen is its practical and clinical character; and there is no disease to which our frames are subject, from the ailment of the lisping infant through all the phases of disease attacking the adult, including the diseases of the eye, and all other ailments falling within the province of the physician, surgeon, or obstetric practitioner, which you will not have an opportunity of seeing and studying during the period of your pupilage. I feel that many of my hearers may fancy I have sketched a path so difficult that few can follow it,—that they are entering a profession which is to be the rock of many, —the haven of a few. Believe me, such is not the case. I honestly tell you that you have a precipitous track to pursue, but, having overcome it,—having once gained an eminence on which you may stand, and, with a safe conscience, say, "I have done my duty in my pupilage; I have availed myself of all the opportunities placed before me: I feel a safe, although humble, confidence in my knowledge and experience,"—then, when you can say this, if you ask me what you may expect to obtain, I boldly answer, success and competence.

It has been said that rank does much for the members of our profession who are favoured by accident of birth; that wealth exerts its influence on the career of a favoured child of fortune; that interest can thrust success upon those who, from various circumstances, can bask in its beams. To deny that such fortuitous aids can help a man's career in any pursuit would be absurd; daily experience would contradict me; but, gentlemen, let me assure you that all the influence of high birth,—all the resources of opulence,—all the effects of interest, although they may save an ignorant man from sinking, can never push him forward into a a brilliant career. Remember, we have to administer to the wants of our fellow-creatures at moments when they would pawn all their rank, their wealth, their worldly influence, for the chance of life; nay, for a moment's alleviation of pain. Those who would thus discard the most brilliant allurements of life for relief are not the most likely persons to be dazzled by them in their physician. The industrious and conscientious medical man, if he be content to pursue a short career of laborious practice, without, perhaps, direct remuneration, will find in every cure he effects a legitimate advertisement of his skill, and thus will pave his way ultimately to competence, if not to fortune. As to scientific fame, it is the fault of every one if he does not obtain a reputable share of it. There is scarcely a physician or surgeon in London, who has any pretensions to be regarded as a man of science, who has not more or less cut out his own path to fame,—has achieved his own nobility. Let me, however, prepare you for the first feeling of disappointment experienced on leaving these walls for the world, at not finding yourselves appreciated as highly by the public as by your teachers and fellow-students. It has been well said that, "when hopes excited within the cloisters are not realised beyond it,—when academical rewards produce not public advantage, the general voice will not squander upon the blossom the praise and gratitude which it reserves only for the fruit. Let those, therefore, who have been successful in their academic career, be careful to maintain their speed; *otherwise those petty kings within the walls of the college will find themselves dethroned monarchs when they mix with the world.*"

Do not, gentlemen, ever be tempted by the delusion, that you will elevate your positions by meddling with disputes concerning the political relations of your profession. It is a miserable waste of time,—a wretched prostitution of talent,—to devote the one or the other to party squabbles. Believe me, that a high position can never be gained, a scientific reputation *earned*, or a brilliant practice acquired, by such means. Whichever of the three divisions of the profession (the necessary existence of which appears not only to be sanctioned by custom, but demanded by the limitation of human endowments) may ultimately fall to the lot of any of you, permit me to assure you, that it is by acquiring a reputation for talent and experience that you will better serve your own interests and those of our profession, than by mixing in ridiculous disputes concerning visionary distinctions about the right of voting, and political standing. The sick man will patronise the physician or surgeon who is best known as the successful practitioner, and not him who is alone notorious as the medical agitator and reformer. The only effectual mode of reforming our profession is to begin with ourselves. Let each member feel that the rank and station of his profession depends upon himself; let him, by his integrity of conduct,—by the conscientious practice of his profession,—by his taking every convenient opportunity of casting some contribution, however humble, into the treasury of our science, make himself respected, and he will thus do more towards effecting a real reform than by wasting his time by cavilling at the constitution of the governing bodies of our profession. Future ages will recognise the fame of a Bright or a Cooper, without inquiring whether they were Conservative or Liberal in their views on medical policy.

You will probably hear, in the course of your studies, of the good fortune—or good luck, as it is termed—of some who have launched their boats on the waters of life before you, and of the ill-luck and bad fortune of others. Gentlemen, I do not recognise such terms. Accumulate experience, acquire knowledge, cultivate industry, and then struggle for a position, however humble, on which you can commence to scatter around the rays of knowledge you possess, or, in the quaint phrase of a puritan writer, "a pedestal on which to place your candlestick," and, having got this, the rest, if blessed with health, is, humanly speaking, in your own hands. Your own deeds,—your own conduct, will constitute your good or bad fortune—luck, or by what other name you please to call it.

> "Our acts, our angels, are, for good or ill,
> The fatal shadows which pursue us still."

I am firmly convinced, that the most important influence destined ultimately to illuminate or to darken your future careers will be generated during three or four years of your pupilage. As certainly as industry, talent, zeal, assiduity, and integrity, are the necessary elements of success, so certainly are idleness, carelessness, and a love of what is called pleasure, the harbingers of misfortune. The signs of the times are changed from what they were half a century ago. It is not sufficient for a person to become an accomplished man of the world, or to acquire the epithet of a "good fellow" alone, if he wishes for success in any of the engagements of life. We must all live up to our vocations, and devote ourselves with earnestness and probity to its duties, if we wish to succeed. There probably never was an æra in which a man promises to be so completely appreciated for what he really knows, and for his fitness for his calling, as the present. *The spirit of utilitarianism is abroad*, and, if it has done some evil, has at least thus far effected good. The great and dangerous rock upon which so many have struck and foundered is the indulgence of worldly pleasures,—of sensual gratifications. These I must, under whatever form they assume, emphatically denounce as the most dangerous tempters of the student. The seductions of irregular associations, even apart from their debasing influence upon the mind, interfere with the habits of industry and the sober discipline of study, and, once broken, the thread of your legitimate duties is too often never effectually repaired. There are apologists for all irregularities, and the argument most generally urged in favour of those to which I have alluded are advanced on the plea of the necessity of mental relaxation to the preservation of health. It is true, that the bow should not always be kept bent, that the string should be occasionally loosened, but let this be done by a proper variation of your studies, and by the exchange, when opportunity offers, of mental labour for healthy bodily exercise. With infinite wisdom and paternal kindness have the commands of Holy writ been directed to this very matter; for, even if I dare for an instant to look upon the command, "*Keep holy the seventh day,*" in any other light than that of rendering a grateful homage to Omniscience, I would venture to allude to the influence of a day of Sabbath or rest upon your own bodily and mental health. The cessation from secular duties on one day in the week, I would distinctly and boldly declare to you is the most certain mode of avoiding the bad influences on the health contingent on a life of study. All pleasures which your religious and moral feelings tell you, on reflection, are improper and sinful, must be ever avoided. Six months' hard study will not pale the cheek nor dim the eye so much as a night's intemperance. All gratifications of this kind are as evanescent as they are delusive, and too generally bring their own punishment with them. With deep feeling and truth did a child of genius and misfortune, one who long smarted under their sting, remark that—

"———pleasures are like poppies spread,
You seize the flower, its bloom is shed;
Or, like the snow-flake in the river,
A moment white, then melts for ever;
Or, like the Borealis race,
That flit ere you can point their place;
Or, like the rainbow's lovely form,
Evanishing amidst the storm."

There is, gentlemen, but one mode of fortifying yourselves against loose temptations, which the experience of ages has shewn to be infallible; it is the heartfelt consciousness of being responsible for your actions to a higher power,—to that Almighty Being whose eye is never removed from you—whose protection never fails you,—and who, in His revealed Word, has presented to you the best guide and most faithful monitor on earth, whilst it is your only one to a happy eternity.

But it is with pride and satisfaction I feel that the cautions I have thought right to give you are less required than they once were; for, despite the coarse jests and sarcasms so often levelled against them, I honestly believe that, taken as a body, a more exemplary, a more excellent class of young men, do not exist than students of medicine. It is with pleasure that I here repudiate the silly caricatures drawn of them, and the imputations cast upon them by the popular writers who pander to the bad taste of the public, and by those who know nothing of them,—imputations easily explained, by the circumstance, that every idler who can afford a decent coat, and who, for some indiscretion or other committed during the hours of his emancipation from the counter or shop-board, finds himself under magisterial correction, almost invariably asperses the body to which you belong, and attempts to give himself a respectability to which he has no pretensions, by impudently styling himself a medical student.

Do not, gentlemen, forget that you have chosen a school whose *alumni* have always achieved for themselves the highest character for knowledge, for industry, and gentlemanly conduct. I am but expressing the feelings of my colleagues, in stating that, if one of them were asked of what feature of this school he is proudest, and upon what circumstance he would with most readiness stake the reputation of this hospital, he would cheerfully and unhesitatingly reply—upon the high character and integrity of its dents. Guy's pupils have never lagged behind in any honestly contested race; there is not a part of the civilised world where those who have received their education within its walls have not made their alma mater respected. These praises, emanating from an officer of this hospital, may seem too partial, but they are supported by the voice of others totally unconnected with our school. In public examinations, removed from our influence, and out of our walls, our men have ever well and successfully maintained a high position. As one among many such achievements of our pupils, let me point out for your example the positions recently obtained by two of our most industrious students, who, not content with passing a creditable and difficult examination for their degree, went in for honours, occupied the first class, one far distancing his competitors, by becoming a triple prizeman. I call upon you to emulate these gentlemen; they, in common with many of their predecessors, have advanced the standard of Guy's school to the highest pinnacle; it will be for you to take care that no one shall cast it down.

Our profession is said, and not untruly, to be a jealous one. In this respect it shares the fate of all occupations in which success results from the conflict of talent, and in which a scientific warfare is, if the expression be permitted, the best and surest means of success. But, gentlemen, this is a most unnecessary and iniquitous contingency of all professions; if we must be jealous, let it be of the dignity and usefulness of our calling, and not of each other; there is room for all of us, and none for jealousy. By indulging this bad and unchristian passion, and its ally, envy, we are deservedly punished, by losing our proper status in the eyes of the public, and ultimately forfeiting the esteem of our own brethren.

Take care that a creditable emulation, dictated by honesty of purpose, take the place of envy in your hearts, whenever you desire to possess a position already filled by another. Do not attempt, by insinuations or suspicions, to injure his fair fame or blight his prospects. A man who can do this, is only kept by the fear of punishment from exchanging the slanderer's tongue for the assassin's knife. Labour, on the contrary, to prove to the world, by your industry and acquirements, that you are more fitted for the task than your successful rival. Try, if you please, to excel a competitor in the race by fair means, and not by taking mean advantages. For the sake of the dignity of our profession, do not permit the trickery and foul play scouted by the jockey to dim its lustre, or be regarded as leading to an eminent position among its votaries. It is unhappily true, that in some rare instances a man may by such means succeed in obtaining a position of public trust for which experience proves him to be unfitted; but do not let these melancholy instances of unfortunate success lead you to follow their example, nor induce you to believe that the end justifies the means. Pause for a while, and generally you will see the person, perhaps in the midst *of the congratulations of his* compeers, overshoot himself, and become an object fitter for your sympathy than envy.

Let the ethical relations we stand in to each other be ever present in your minds; ever obey the golden rule of doing unto others as we would have them do unto us; and, by giving merit where merit is due, you will thus pass through life with a safer conscience than by attempting to rise on the ruined fame of others. Do not be discouraged at meeting with misrepresentation; do not be crushed by misinterpretation of your honestest endeavours. Go on, gentlemen; time ever brings with it a slow but certain retribution, and justice is ever ultimately dispensed. Few of us have attained our present positions without feeling the wounds inflicted by the malignant tooth of envy, or the withering chill of discouragement or slander; but, after outliving such, their reminiscences, however painful, serve only to make the position we have attained more valued. But, for the sake of your own peace of mind and comfort, let me warn you against taking part in such attacks on the reputation of others, and never lose sight of the anathema of the Roman moralist—

> ———Absentem qui rodit amicum,
> Qui non defendit, alio culpante; solutos
> Qui captat risus hominum, famamque dicacis;
> Fingere qui non visa potest; commissa tacere
> Qui nequit; hic niger est, hunc tu, Romane, caveto.
> HORAT. Sat. 1, iv. 72-76.

Strive to earn the highest compliment I ever heard paid to any one, and which was once given in my hearing, to the memory of an estimable physician (Dr. James Johnson), who has been taken from us within the last year, when it was said that he had the courage to speak well of every body.

Gentlemen, I conclude; and, in concluding, feel more deeply than when I commenced the serious and almost solemn nature of the task I have undertaken. The officers of this hospital and school who are privileged to address you are about twenty in number, and as every one in turn is called upon to open the medical session, each must feel that he most probably performs that duty for the last time,—for who can insure twenty years of life? And even should his life, or at least that part of it devoted to public duties, be prolonged, how different will be his position! the snows of advancing age will have replaced the vigour of manhood, and he will address a generation yet unborn, the members of which will receive from you, in turn, those impressions which will so importantly influence their lots in life. Hence the sense of deep responsibility we feel regarding the principles we endeavour to inculcate; and, for my own part, sensible of the imperfect manner in which I have performed the duty, I feel a pleasure in borrowing the glowing words of a late distinguished ethical writer, and in his language to excite your emulation and animate your zeal, by reminding you of the high functions of your future mission as practitioners of medicine, when "it will be your honour and felicity to be engaged in an occupation which leads you, like our blessed Lord during his abode on earth, to go about doing good, and curing all manner of diseases. To you, learning now opens her stores, that they may be applied to the sublimest purposes—to alleviate pain, to raise the drooping head, to renew the roses of the cheek and sparkling of the eye, and thus to gladden, whilst you lengthen life.

"Let this hospital be the theatre in which you will learn to display, with assiduous and persevering care, your science, skill, and humanity; and let the manner correspond with, and even heighten the measure of, your benevolence. With patience hear the tale of symptoms, silence not harshly the murmurs of a troubled mind, and, by the kindness of your looks and words, evince that Christian condescension may be compatible with professional steadiness and dignity."

WESTMINSTER HOSPITAL.

On Saturday, October 3d, the school attached to this Hospital was opened for the session. The introductory address was delivered by Mr. Erichsen to a large audience, comprising many of the most influential of the governors of the hospital, of the clergy, and medical practitioners of the district. After adverting to the importance of the medical student properly filling up the period of his studies, by which his future success in life and position in society will in a great measure be determined, and urging upon the student to preserve the zeal and activity that now animated him undiminished during his future life, the lecturer proceeded to point out the causes that had led, and were leading, individuals to eminence in this and the other learned professions. He pointed out that although the gift of genius might be denied to most, still that we all had faculties of the mind, which might, by constant cultivation and care, be so improved as to supply the place of genius;—that if any one would act with a strong and earnest determination to become eminent in his profession, he would, if he pursued his determination with untiring energy and perseverance, and kept the end he had in view steadily in mind, infallibly succeed, provided he had that physical strength allotted him that would enable him to carry out his resolve;—that there could be no doubt but that original differences existed in intellectual as well as in bodily power, but that in by far the majority of cases, by care, labour, and vigilant attention, great success might be obtained; that the mental powers were capable of progressive and almost indefinite improvement, and that as the bodily strength might be increased by proper care, so might the faculties of the mind be invigorated, and be adapted to the highest purposes, by early, constant, and careful cultivation; and we find, on examining the discipline by which the mind of any man of eminence has been trained, that it is only by this constant and unremitting vigilance, perseverance, and care, that success has been obtained, and not by trusting to the unsteady inspirations of what has been called genius.

The student should likewise learn to estimate properly the value of time; much of his success will depend upon economy in this important respect, and on punctuality in all the relations of life. Every man is accountable for his time, but none more so than the medical student; for though the period allotted to study may at the commencement seem long, it will pass away quickly and cannot return, and that it will depend in a great measure on the way in which this has been filled up how he will be able to acquit himself when suddenly called upon in cases of great emergency, when on the state of his previous preparation it will often depend whether the result be life or death, and whether consequently he will be able to practise his profession with credit to himself, and benefit or even safety to the community at large.

After farther cautioning the student against allowing himself to be involved in the bondage of bad habits, or indulging in low and debasing pursuits, Mr. Erichsen proceeded to give a rapid sketch of the nature and objects of the various studies that would occupy his time. He dwelt especially on the importance of a sound and practical acquaintance with the details of chemistry and anatomy—the foundations on which medical science rested. He urged the student to an intimate acquaintance with the details as well as the principles of chemistry, not merely on account of its intrinsic interest, or the satisfaction that is derived from the beauty of its experiments, or the certainty of its evidence, or indeed on account of its close and intimate relation even to pharmacy, to medical jurisprudence, or to physiology,—but rather on account of the close connection that has of late years been established between chemistry and pathology and clinical medicine. The impulse that organic chemistry has received, within the last two years, from the labours of a host of philosophers having tended in a remarkable manner to give us a more profound insight into the essence of the vital processes, has cleared up the relations of the different articles of food to the purposes they have in the economy, and has thrown the greatest light upon the causes, and has enabled us to direct with much greater certainty and effect the treatment of many important diseases, especially those of the digestive and urinary organs. Hence a sound acquaintance with its principles, and a practical knowledge of its manipulatory details, can no longer be looked upon as mere ornamental accessories of the medical curriculum — the accomplishments, as it were, of the physician—but must be regarded as essential requisites to the education of every man who would practise his profession with credit and success.

The lecturer next proceeded to point out in very forcible language the necessity that there existed for every medical man to be thoroughly grounded in the study of anatomy and physiology, not only on account of the important relations that subsist between these sciences and practical surgery, but with pathology and every department of the healing art. After pointing out the important services that experimental physiology had rendered to practical surgery, as evidenced by the labours of John Hunter and Sir C. Bell, and on the necessity that there exists, in order to make physiology available to practice, not to study the functions of organs separately, but to pay especial attention to them as parts of a whole, associated and linked together by connection and sympathy, and thus to judge properly of their reciprocal influence on disease.

The next subject dwelt upon was the importance of an acquaintance with classical literature, and Mr. Erichsen showed the affectation of practical wisdom of those who attempt to depreciate languages, an acquaintance with which entails a knowledge of the characters of some of the greatest men that ever lived, and of the noblest sentiments that the human mind ever conceived. An acquaintance with their language likewise leads to a more correct understanding of our own, and to greater order and precision of ideas. He likewise dwelt upon the advantages that attend an acquaintance with one or more of the more generally used European languages, and directed especial attention to the necessity of every member of a learned profession being able to speak and write his own language correctly, as otherwise he would be the means of bringing contempt and ridicule on his own body, and, however great his professional skill might be, would suffer from the slenderness of his general acquirements.

After pointing out the necessity of attending closely to clinical instruction, and to whatever might make *him accomplished in* the practice of his profession, Mr. Erichsen warned the student against ever turning his profession to unworthy purposes for the mere sake of gain, and cautioned him strenuously against indulging in doubt or scepticism as to the power of his art — of falling into voluntary or involuntary quackery. He pointed out the great powers that medicine already possesses of curing with certainty many diseases, especially of an acute kind, and of checking or materially relieving others of a more chronic character; and he expressed his conviction, and stated at length his reasons for firmly believing, that the principles on which medicine is founded are as exact as those which regulate other sciences.

Mr. Erichsen concluded a very impressive address by urging the students not to interfere during the progress of their studies, when every moment was of value, and had its own occupation, in those changes in medical politics by which the profession is at present being agitated, and when the period arrived at which they might possess sufficient time and experience to enter upon the discussion of such subjects, to allow themselves to be guided by no motive but a desire to benefit and protect the whole body of the profession; and, above all, before engaging in any cause, to inquire into the character of those with whom they were about to associate themselves; the time was past when men without character and principle were tolerated, either by the profession or society at large, and if they allowed themselves to sacrifice their honour or probity, they would inevitably, whatever their arguments might be, become lost and ruined men.

A POINT OF DIAGNOSIS BETWEEN RUBEOLA AND SCARLATINA.

It occasionally happens that there is some difficulty in diagnosing the eruption of scarlet fever from that of rubeola, for in the former affection the rash, instead of being, as it usually is, uniformly diffused, occasionally occurs in minute red points and spots, not unlike those of measles. In such cases, when there is difficulty in deciding which disease a particular patient is labouring under, M. Chomel is in the habit of forming his diagnosis by an examination of the sputa. In rubeola, the sputa are invariably, he says, opaque nummular masses, of a grayish colour, and floating in an abundant liquid. At first sight, they closely resemble the sputa of patients in the second stage of phthisis, yet differ from them in the fact, that the liquid in which they float is turbid and milky, whilst that in which the sputa of phthisical patients float is clear and transparent.—*Encyclop.* des Sciences Méd. Mars 1846.

Original Communications.

ON THE

DIAGNOSIS AND TREATMENT OF RUPTURE OF THE TENDON OF THE TRICEPS CRURALIS MUSCLE.

By John Grantham.
Fellow of the Royal College of Surgeons, &c.

I beg to offer the following remarks on the diagnosis of rupture of the tendon of the triceps cruralis muscle, as very few examples of such cases have been recorded either by English or Continental writers; and, if there be any merit due to priority in reporting such injuries, I believe I may claim that privilege, as having been the first to notice the nature of these cases in English literature (see Medical Gazette, 1841): consequently I infer little is generally known as to the symptoms and effects of such an accident, so much so, that although alert to the possibility of a rupture of the tendon of the triceps cruralis muscle, I, in the present case, overlooked the true nature of the malady during the first four days; therefore believing another surgeon may also be so circumstanced is the inducement to publish the following case. I was sent for in the spring of this year to see a medical man, who in running across a yard, after visiting his patient, was thrown down upon the knee, from the effects of his dog crossing his path, which instantly deprived him of the power of extending the limb, and was attended with most excruciating pain. On examination I found it almost impossible to extend the leg, the pain being referred to the seat of the inter-articular cartilages of the knee-joint; the pain was excessive round the head of the tibia. Supposing a displacement of the semilunar cartilage or cartilages I flexed the limb completely, and brought it suddenly forward: this failed in removing any of the symptoms. I was now induced to consider the mischief to be in the subcutaneous structure on the sides and front of the knee-joint, and ordered hot fomentations of ammonia and water to be constantly applied, which, by the following day, gave great ease to the parts, yet the pain and inability to extend the limb remained. This treatment was continued until the third day, when I applied friction with hot lard and a flannel roller: this also appeared to improve the case, and cause a considerable diminution of pain; nevertheless, on the fifth day the inability to extend the leg remained the same as on the first day. On tracing the tendon of the triceps cruralis I found the separation of the parts, which at once explained the cause of the non-extension of the limb; and here, I remark particularly, that it is of great importance, when the leg cannot be extended, after an injury, to trace with the finger the tendon of the rectus femoris muscle. Although this case did well with proper support, and a moderate use of the leg after the fourteenth day, yet in justice to my opinion as to the first statement, that the inflammation was seated in the subcutaneous structure over the region of the tibia, the tenderness did not leave that part without the use of counter-irritants. On further reflection it will be seen how great is the resistance which is required to overcome the power of the flexors of the leg. so that a rupture of so great a muscle as the triceps would inevitably lead to such a result as the symptom of non-extension of the leg. Ruysch, in the Gazette des Hospitaux, June 14th, 1845, cites two cases. The accident was produced by the patients falling upon their knees, the legs being violently flexed on the thighs. Dupuytren treated these cases by keeping the limbs permanently extended during the union of the parts. I would advocate partial flexion and extension after the fourteenth day; it will expedite the recovery, and be less painful to the patient. Thick lateral and anterior pasteboard splints applied *wet* with a roller will be found sufficient to produce approximation of the lacerated parts.

EPIDEMIC DYSENTERY AT DUSSELDORF.

Dysentery is at present very prevalent and fatal in the small manufacturing town of Glaback, near Dusseldorf. Out of a population of 12000 persons, no less than 139 were cut off by the epidemic in the course of a few days

CASES TREATED IN THE WESTMINSTER HOSPITAL.

Reported by

Mr. F. Wildbore, M.R.C.S.L. House-Surgeon.

My year of office as house-surgeon to the Westminster Hospital has given me opportunities of watching many most interesting cases, of which I have generally kept notes. The publication of such cases fairly taken, with or without comment, cannot fail to be useful, and I trust all other metropolitan house-surgeons will take a similar course, and publish the result of their official experience. Many of the cases recorded were under the care of Mr. Phillips, and to some of them he may append observations.

Fractured ribs and forearm, with chest complications, &c.

Richard Cooper, a labouring man, 46 years of age, was admitted into Northumberland Ward, on the 30th of November, under the care of Mr. Phillips, for fracture of two or three ribs on the left side, and fracture of both bones of the forearm, produced by a fall from a cart. When brought in he was in a state of collapse. It was found also that considerable emphysema existed, extending over the left side of the thorax, and as high as the neck. Means were taken to rouse him from the collapse, and a flannel roller was applied round the chest. In the evening reaction had set in, and the oppression in breathing had increased; the pulse was 96, and full; the tongue dry and brownish; respirations 54 in a minute, and pain on left side severe and constant: there was, however, no hæmoptysis.

℞ Ant. Potass. Tart. gr. ¼; Mag. Sulph. ʒj.; Mist. Camph. ℥j. tertiis horis. ℞ Calomelanos, gr. j.; Ant. Tart. gr. ¼; Pulv. Opii, gr. ¼ o. hôra.

This treatment was continued till 11, P.M. The pulse had then diminished in volume, and the pain in his side was less.

The mixture was ordered to be continued, and the pills to be taken every three hours.

Dec. 1st.—Passed a restless night. Pain in the side still constant; a slight hacking cough; no sputa; respirations improved, 44 in the minute; tongue foul; pulse 72; skin cool; bowels open; chest very resonant on left side; no extension of the emphysema.

Vespere.—Pain more severe; pulse 104, compressible; incessant short hacking cough.

2d. — Less pain in side and less cough; pulse 90, full and jerking; mucus rale in large tubes heard when standing by the side of the bed; great thirst; tongue foul, dry, and brownish in centre; diarrhœa.

Omitte pil. et Mist. Mist. Acet. c. pro re nata.

3d.—Bowels quiet; cough continues very troublesome, and severe shooting pain is felt on left side of the thorax: it is much aggravated by coughing, and on a full inspiration it extends through to the sternum. Respirations 40 in the minute; emphysema diminished; pulse 88, firm.

Cal. gr. j.; Pulv. Opii, gr ¼. 6tis hôris.

5th. — Better; dyspnœa and pain much less; emphysema diminishing; gums a little affected by mercury.

7th.—Dyspnœa nearly gone; pulse 72, natural; skin cool; pain in chest only occasional, or felt on moving; cough still troublesome; gums fairly affected.

Empl. Lyttæ lateri. Cal. gr. j.; Pulv. Jacobi veri, gr. j. bis die.

After the last date the chest symptoms steadily but slowly improved. He continued to take the Calomel and James's powder to the 8th of January, with a view to get rid of the morbid products on the left lung, and his gums were affected by the mineral during the whole period of thirty-four days, the solidification of the lung gradually lessening, and so far as the chest was concerned his convalescence was complete.

The fractured bones of the forearm, which had been steadily kept in position by the ordinary straight splints, were then examined, and it was found that no progress had been made towards the formation of a bony union: they were quite moveable one upon the other. The mercury being no longer necessary for the chest affection it was discontinued, and the arm replaced between the splints. On the 26th of February he was discharged cured, with a firm bony union.

This case seems to support the view that union of fractured bones may be interrupted by the action of mercury upon the economy.

It is also one of several instances which have occurred here during the present year of a wound of the lung being unaccompanied by hæmoptysis.

Comminuted fracture of femur—non-union—phthisis.

Thomas D., æt. 51, a waiter at a coffee-house, was brought to the hospital on the 20th of July with a fracture of his right thigh. He slipped upon a piece of orange-peel whilst crossing Westminster Bridge, and fell heavily into the carriage-way. It was an oblique fracture, commencing about three inches above the condyles, and extending upwards and backwards along the femur. The upper fragment, with a sharp angle, projected forcibly against the skin, and it required the greatest care to prevent laceration of the integuments. The inferior portion was drawn down between the flexor tendons, where it could be distinctly felt. An attempt was made at the time of his admission, and on the following day, to bring the fragments into proper apposition, but without success; in consequence, apparently, of the intervention of muscular structures. The limb was placed on the double-inclined plane, and extension was kept up by means of pads well fitted into the ham; the pelvis bandage was accurately adjusted, and short splints were placed around the thigh. At a subsequent period broad straps of adhesive plaster spread on leather were placed firmly round the fractured part, with a view to set up a slight inflammatory action, and to get rid by pressure of the intervening structures. For some months previous to the accident he had suffered from cough, night sweats, and great debility; for several years he had been ailing, and unable to follow his usual avocation. Shortly after his admission the chest symptoms became aggravated; the cough was short, hacking, and incessant; the abdomen tympanitic; pulse rapid and feeble; tongue brown and dry: delirium succeeded, and on the 19th of September he died, just two months after the fall.

I tied the femoral artery, placed a cord tightly round the thigh, and injected the limb with size and vermilion from the posterior tibial artery, and removed as much of the femur as was necessary to examine its condition. The thickened periosteum at the point of the upper portion of the fracture was firmly adherent to the skin, the rectus was pierced immediately above its tendon, and this muscle, with the crureus and vasti muscles, were entangled in the fractured extremities. The muscles were much attenuated, and their structure was infiltrated with a greyish purple and very vascular texture, like organised lymph, extremely dense and firm when cut into, betraying no trace of bony deposit except at one point, where the bones were laterally nearly in contact. Here the lymph was more dense, and a number of small spongy granules of bone had been thrown out more numerous near to the fractured edges. The bones could be moved laterally as on a hinge, but they were firmly knit together by this new organisation, in which could be traced a great number of small vessels carrying the injection. The periosteum in the neighbourhood was very vascular. The lower portion of fracture was comminuted and fissured, and in the fissures there was no attempt at reparation. The preparation is preserved.

Here, then, are two cases in which bony union was prevented; in the one case temporarily, in the other, had the patient lived, it would probably have been permanent. In the one case the non-union appeared to depend upon a state of the system induced by the use of mercury, and disappearing when the system ceased to feel its effects. In the other case, it depended directly upon the interposition of a considerable mass of muscular fibres, from which the ends of the bone could not be disengaged. Whether in the patient's condition, suffering as he was from phthisis, union would have taken place had there been no physical obstacle, may be a question.

MEDICAL GAZETTE.

FRIDAY, OCT. 16, 1846.

In a recent number* we endeavoured to show, that the present practice of interring the dead in the midst of large towns and crowded populations is detrimental to public health; and that some legislative enactment was as much required to prevent its continuance as to abate the admitted evil which results from imperfect drainage and sewerage. It is, however, not a little remarkable that, in spite of the common-sense view of the subject, and the numerous facts contained in Mr. Chadwick's report, those who take an active share in legislation upon the health of towns, are opposed to any change in the present mode of interment. We are told, for example, by Sir James Graham, one of the introducers of the Health of Towns' Bill, that there is no metropolis, considering the extent of population, in which, on the whole, the public health is so good as in this. His inference is, that intramural interments are not prejudicial to health, and therefore that any change in the practice is uncalled for and unnecessary. The same remark applies with equal justice to many of the large cities and towns of Great Britain; but to what do we owe this reduction in the annual rate of mortality, if not to the few improvements which have been slowly made in ventilation, in an increased supply of water and better drainage? Various sanitary reports demonstrate, that even with this diminished rate of mortality, there is a far greater sacrifice of life among the labouring classes than need occur under a proper system of hygienic legislation; and the real question to be considered is, not whether the per centage of mortality is lower in an English than in a continental town or city, but whether it is not higher than it would be if certain causes noxious to health were removed. Are we to be told, that because only one person in forty-four dies annually in London, and only one in forty-five in the provinces, we have reached a standard above the continental average, with which we ought to be satisfied, and take no further steps to improve the healthy condition of the population? If this is not the view of those who adopt this absurd argument for non-interference, what does the language imply? And if it be their view, on what principle can they undertake to support a "Bill for the Improvement of the Sewerage and Drainage of Towns and populous Districts, and for making provision for an ample supply of water, *and for otherwise promoting the health and convenience of the inhabitants?*" Such is a plain and simple statement of the fact. They express their belief that putrefying animal matter, in the shape of fifty thousand corpses annually buried in the midst of a population of two millions, is not likely to endanger public health, even when, in some localities, there is scarcely earth sufficient to cover the coffins, and in others the bodies are so numerous as to raise the ground considerably above the level of the adjoining streets; while they are ready to enter upon a most complex system of legislation, in order to compel the removal of other kinds of animal matter by proper drainage and sewerage!

The Registrar-General's last report informs us, that the mortality in the metropolis is higher than that in the country, being in the proportion of 2·294 to 2·209 per cent.—a clear proof that there are some causes in operation to shorten the lives of the inhabitants of large towns. What those causes are it is the duty of the legislature to discover, and, if possible, to remedy; and one of them is so plainly indicated by Mr. Chadwick, in his Supplementary Report of the Practice of Interment in Towns, that we consider it quite unnecessary to re-argue this part of the question. Those who contend that the practice is not injurious to health, are taking up a view contrary to fact and reasoning, and contrary to the principles upon which they proceed to legislate in other cases.

---

* Page 581.

Other arguments have been adduced in favour of a change in the practice, and among these we may select that which is based on the *indecency* of the practice. We know, on good authority, that in a certain London graveyard, in which the soil is rank with the decomposed remains of the dead, the charge for interments is regulated by the depth—a practice, we believe, quite common in the metropolis. A person is informed that, by the payment of a high fee, a coffin will not have to be removed from the grave in order to allow another coffin to be placed beneath it! The low fee leads not merely to this act of desecration, perpetrated as it must be under the eyes of those who ought to be most earnest in checking it, but probably to the entire removal of the body, the selling of the coffin and the funeral ornaments, with the destruction by fire, or in other ways, of the last remains of the dead! and so nicely are the fees adjusted, that the earth piled at the side of the grave is calculated in the measurement as part of the depth, whence it happens, that even when the remains are left undisturbed, they become a source of putrescent exhalations to the inhabitants of the neighbourhood. Many flagrant instances of the desecration of the remains of the dead have been recently made public; and we are coolly told, in reference to these abominations, that when they have once taken place, the parties may be punished by indictment! No consideration appears to be given to the prevention of such indecencies by removing the causes,—*i. e.* by shutting up and entirely prohibiting interments in graveyards, whether private or parochial, already over-crowded; but these gross offences are to take the chance of exposure, to lead to the expense of a parish prosecution, and the risk of a compromise or of an acquittal upon some trickery or technicality in the law-proceedings.

With the existence of a proved public evil, a certain injury to public health, and the fact that the present practice must in time cease of itself, it is scarcely necessary to examine the arguments which have been adduced for the continuance of this vile practice. There must be a limit to the elevation of graveyards above the streets, and to the enlargement of vaults in churches, unless some secret and inexpensive method is taken by those who profit under the present system, to get rid of the surplus bodies. The annual interments are now much about the same as if the whole population of Leicester were brought to be buried in London! Decay cannot proceed fast enough, and it will require more frequent holocausts, or more frequent contracts with dust-contractors to cart away as rubbish, human remains, in order to make room for the increasing deaths in a rapidly increasing population. Legislation may be protracted, but sooner or later a measure will be forced upon the Legislature either for providing cemeteries out of towns and cities, or for preventing that secret and extensive desecration of the graves which in some measure tends to postpone the necessity for immediate interference.

We must here, however, advert to two pleas in favour of the intramural system, as they are put forth by the most active supporters of the *Health of Towns'* Bill:—1. The increased expense to the poorer classes by rendering burials out of towns compulsory. It is somewhat singular that an objection of this kind should proceed from a legislator who advocates a measure no less than thirty-four clauses of which are devoted to the levying of rates for the compulsory sewerage and drainage of streets and houses in towns. All this machinery is professedly for the benefit of the poor, and the fact shews that remedies may be applied where the disposition exists, without entailing a heavy expenditure on those who will be most benefited by the change! The owner of a small tenement in a town might find it much less expensive to collect his refuse in an ill-covered cesspool on his premises than to be tyranically compelled to pay a rate, and have the street sewered and his premises drained against his will: but will this prevent the advocate of the Health of Towns' Bill from carrying out his views? Assuredly not: and the good sense of the public will sooner or later go with him. An argument of this kind; *i. e.* that we are to regard expense to the poor in the suppression of a practice which endangers their lives, is a mere subterfuge. The expense would be still less than it is at present by allowing the pauper population to inter their dead upon their own premises; but we presume that, even if such a practice were legal, the legislature would soon find good reason to abolish it without reference to the expense to which the poor might be put by the change! It would then be found that the practice was detrimental to health, and must be abolished. The only difference, however, between this and the present system is, *that of the two, the latter is* rather more dangerous; because greater evil is likely to follow from the miasmata evolved from several thousand corpses accumulated in *one* small spot, than where they have been buried in isolated patches of ground. To both there is precisely the same objection, on the score of public health; for there is no graveyard in London which is not closely surrounded by dwellings.

OUR readers will have observed that since the cessation of the intense heat which prevailed in August, the weekly deaths in the metropolis have steadily declined, and have fallen below the averages. We this week pass from the summer into the autumn average, and the influence of a change of season will be here manifested. The weekly summer are to the weekly autumnal deaths as 898 : 1000. Diseases of the brain and nervous system appear to be now most prevalent and fatal. Contagious and epidemic diseases are reduced below the averages. The deaths from diarrhœa and typhus taken individually, are above the autumnal average; but then small-pox, scarlet-fever, measles, and hooping-cough, are considerably below the average. It speaks well for the extended influence of vaccination, when, out of a population of nearly two millions, there were only *three* deaths from small-pox during the week, and these occurred in infants! Diseases of the organs of respiration have also just now less than their average fatality.

AN ACADEMY OF MEDICINE AT CONSTANTINOPLE.

ON the 21st September, Redschid Pacha laid the first stone of the new Turkish University at Constantinople. An academy of medicine is about to be founded immediately adjoining it. The sultan has already contributed a large sum to the building fund.

Reviews.

Inaugural Dissertation on Yellow Fever, and on the Treatment of that Disease by Saline Medicines. By George F. Bone, M.D., Assistant-Surgeon to the Forces. With an Appendix, *On the Principles to be observed in providing Barracks and Hospitals for Troops in the West Indies.* By Hugh Bone, M.D., Inspector-General of Army Hospitals, &c. 8vo. pp. 85. Black, Edinburgh; and Longman and Co. London. 1846.

Although the subject of Yellow Fever has for the last hundred and twenty years proved an unfailing theme of discussion, and often of rather hot dispute, to generation after generation of colonial physicians, the question and the disputants still appear to continue alike unexhausted; the disease remains the dire and almost uncontrollable scourge of the West Indies and certain populous districts of America, and the medici of those regions continue to be as energetic and as controversial as ever in their several opposed theories respecting its nature and treatment. The last opinions which we heard respecting the treatment of yellow fever were those of a sensible and well-informed medical man practising in Jamaica, who assured us that mercury was his sheet-anchor in severe cases of this disease; and that, so soon as the gums of a patient with yellow fever became affected, his recovery might be regarded almost as a matter of course. In this pamphlet we find a well-informed physician, residing in Barbadoes, declaring that "the practice of giving calomel with intent to salivate has been tried [in yellow fever], and failed;" and that "if the patient can be salivated, he is but slightly ill; and that those who recover after being salivated might have been cured more speedily without mercury." In this instance, as well as in all cases where we find respectable and really practical men advancing totally opposed opinions as the result of their experience, we are inclined to refer the disputants to the fable of the golden and the silver shield, and to decide in our own minds that both parties are in great measure right, and to a certain degree wrong; judicious and veracious in adhering to the practice which has proved most successful in their own hands, and in stating its results, but bigoted and wrong in not being able to perceive that, in other situations, or under other circumstances, the precise influence of which they have had no opportunity of appreciating, the doctrines and practice of their opponents may be valid and successful. When it is remembered that several distinct forms of tropical fevers are characterised by yellowness of the skin and vomiting of sanguinolent fluid; that the situations in which these fevers are endemic present an almost infinite diversity of climate and position—a difference which may even be met with in the same island, as in the lower districts and the hill country of Jamaica, and where it is observed that the diseases occur in Europeans of all classes and constitutions — it is surely not surprising that the progress and treatment of "yellow fever" should be observed to be modified according to the type of the disease, the situation or climate in which it occurs, or the constitution of those who suffer from its attacks. For our own part, we believe that, with a certain degree of caution, many of the arguments of the contagionists and the non-contagionists, the mercurialists and the non-mercurialists, might be received as valuable materials for the elucidation of the fevers of tropical climates; and we should be glad to meet with a work on the subject by one who had seen and treated yellow fever in various situations, who had commenced the study of the disease without prejudice, and who was capable of taking a really extended view of the subject in all its relations.

The pamphlet before us contains many important and interesting facts, especially those adduced by the elder Dr. Bone respecting the causes of yellow fever, and the sanitary regulations required in barracks and hospitals for soldiers in the West Indies. Take, for instance, the following extracts relative to the "removable causes" of yellow fever:—

> "The places where the causes of the disease principally prevail are the vicinity of foul drains, the leeward of foul marshes, the banks and channels of rivers which are dry at certain periods, the leeward openings of

gullies, and crowded and ill-ventilated rooms and ships with foul holds. Crowding in barracks and hospitals has been the principal cause of the mortality of the troops in the West Indies, especially when aided by the suffocator window; (that is, a window of boards hinged at the top, and opening outwards). Climate, rum, bleeding, and mercury, each have killed their thousands in the West Indies, but crowding and suffocators their tens of thousands. Is it astonishing that the soldier should die, when allowed only twenty-two inches of wall for his hammock or bed" [this was written in 1829] in a room hermetically sealed by the shut suffocator, or with the suffocator open and a current of air blowing upon his heated body? The astonishment is, that he could live." (p. 12.)

"In the year 1818, 34 officers and 435 men of the Royal York Rangers were quartered in Trinidad; 130 of the men died, and principally from yellow fever, but none of the officers died. The disease was caused by suffocation in the crowded barracks with suffocator windows, and by faults in managing the non-naturals. In the barrack of Orange Grove, Trinidad, the band of the Royal York Rangers, in the windward end of a barrack room, were healthy, while the Royal Artillery in a partitioned-off part of the leeward end of this room were unhealthy; and from the 26th August to the 26th November, 1818, six of them died of yellow fever. The band were moved from the windward room, and the Royal Artillery were put into it, and immediately became healthy. But women and children succeeded the Royal Artillery in the leeward room, and these in a few days became sickly. These occurrences were represented by Dr. Bone to the Commandant; the partition between the rooms was knocked down on the 8th December, and the women and children were all well on the 11th December; and from that period, the room, although not whitewashed, continued to be as healthy as any room in Orange Grove.

"That the mortality of the Royal Artillery in the leeward room in Orange Grove barrack was owing to crowding and suffocation, is evident from the healthiness of the band of the Royal York Rangers in the windward end of the barrack-room, when the Artillery were dying in the leeward end of it; from the immediate healthiness of the Artillery when removed from the leeward to the windward end of the room; and from the immediate restoration to health of the women who succeeded the Royal Artillery in the leeward room so soon as the partition wall was knocked down, and the pure breeze admitted to sweep through it. The injudicious situation, on the brink of a dry river, bad construction, and *crowding of the barrack* in Orange Grove, were evidently causes of sickness to the Royal York Rangers in the sickly season of 1818; and the hospital gorged with sick, and without conveniences, and bearing the name of slaughter-house, was perhaps the head-quarters of death. That some or all of these causes were effective in producing sickness at Orange Grove is proved not only from the known uniform effects of these causes, but from the instant stop to the disease among three of the companies when removed to Fort George, and the early stop to it among the other three companies when removed to St. Joseph's; but even these posts were not without their cases of sickness." (pp. 12—14.)

The following hints are forcibly conveyed, and deserve to be remembered:

"If yellow fever be not contagious, nor imported into the West Indies, in what way can it be generated in the West Indies? Easily, and by the following receipt:—Take of soldiers lately arrived in the West Indies any number; place them in barracks in a low wet situation, or in the mouth of a gully, or on the brink of a dry river, or on the summit of a mountain, and to the leeward of a swamp or of uncleared ground, and where there is no water, or only bad water; give them each only twenty-two inches of wall in their barrack-room; let their barracks be built of boards, or of lath and plaster, and have neither galleries nor jalousied windows, but close window-shutters, and a hole or cellar under the flooring for containing mud and stagnant water, and holes in the roof for the admission of rain, and the windows only eighteen inches from the floor, that they may be obliged to sleep in the draught of air; and let them have drill every morning on wet ground; and when fasting, guard mounting, and all kinds of fatigue, not in the morning and evening, but during the hottest time of the day; when on sentry no shed to keep off the direct rays of the sun; bad bread, putrid meat, few vegetables; plenty of new rum, especially in the morning; discipline enforced by terror and punishment, not by mind and prevention; an hospital similar to the barrack-room, without offices, always crowded, plentifully supplied with rum, scantily with water, and so ill regulated that the men dread to enter it; a firm belief in the doctrine of contagion, and a horror of approaching any person affected with yellow fever. Let these directions be attended to in Trinidad, or even in Barbadoes, and especially when the air is stagnant, or charged with noxious vapours subsequent to long drought, the soldiers will soon die, some of them yellow, some of them with black vomit; and those first in the rooms where these directions have been most carefully observed." (p. 25.)

We regret that we are unable to devote space to a full analysis of the remaining contents of this pamphlet, especially of the Appendix, which contains much valuable information respecting the principles to be observed in providing hospitals and barracks for troops in the West Indies: we must, however, be content with recommending the careful perusal of this chapter to military surgeons, and, indeed, to the whole of our readers in the colonies.

The *method of treatment* is very amply discussed in Dr. G. F. Bone's thesis. "The following"—that gentleman observes—"are indications for curing the disease.

1. To remove the remote causes, (these have been fully alluded to in the above quotations).
2. To evacuate unhealthy materials from the primæ viæ, and from the systems of vessels; and to excite the action of the capillaries of the intestine and skin.
3. To supply materials for the formation of healthy fluids.
4. To excite the action of the excreting and secreting organs.
5. To support the vis vitæ during the disease.
6. To palliate uneasy symptoms.

These are not the only indications, nor are they all distinct from each other, nor all applicable to every stage of the disease, but they are of very general application. The Drs. Bone eschew the use of bleeding and mercurialization in yellow fever; their chief reliance in fulfilling the second indication of treatment rests upon the free employment of mild antiseptic saline aperients. In 1817, Dr. Bone began to use Cheltenham salts and Seidlitz powders for the cure of gastric fevers in Barbadoes, and from that time these powders have been used commonly by him, and by many of the army medical officers in the West Indies. Dr. G. Bone therefore intimates that the credit of adopting the plan of saline treatment in fevers (we suppose that the system of Dr. Stevens is here alluded to) is in reality due to his father. It must, however, be borne in mind that the leading intention of Dr. Bone's plan of treatment is that of *producing* a prolonged cathartic effect, while that of Dr. Stevens was principally adopted with a view to improve the vitiated condition of the blood by the direct application of chemical agents.

Dr. Bone usually administers either Seidlitz powders, Rochelle salts, Epsom salts, Cheltenham salts, or cream of tartar, but other mild saline aperients may be used. Solutions of these kinds are given every hour or every half hour generally for the first twenty-four hours, until from twelve to twenty stools are produced, "or until the stools become nearly the fluids drunk." Many of the draughts are vomited, but the vomiting is easy, especially if tincture of opium be occasionally given with them: occasionally the vomiting requires to be checked by the administration of full doses of laudanum. And Dr. G. Bone has found that "a pint of tepid water, repeated as often as necessary, is also a good anti-emetic." Not, certainly, in cases of vomiting from ordinary causes; but it is now clearly proved that in cases of black vomit the fluid produced in the stomach is of an extremely acid and irritating quality, and hence its dilution may be attended with relief. "In the great majority of cases the disease is cured or rendered easily curable in twenty-four hours; but it may run its course, the force of the disease being, however, broken, till the fifth, eighth, or eleventh day." The above is merely a slight outline of the system of treatment adopted by the authors. We trust, however, that those of our readers who feel anxious to ascertain the full details of the plan, will refer to the original essay.

A Practical Treatise on the Diseases of Children. By JAMES MILMAN COLEY, M.D. &c. 8vo. pp. 467. London: Longman. 1845.

WE have long since determined to take as little part as possible in conferring fame and popularity upon works which, although treating wholly of medical subjects with which non-professional individuals have no concern whatever, are addressed by the authors to the public. And this resolution has been confirmed by an observation of the almost invariable fact, that works of this kind are, in themselves, not likely to receive very high appreciation from professional readers; they rarely rise above mediocrity, and are too often replete with lamentable proofs of arrogance, illiberality, and ignorance. The latter charges can certainly not be brought against the work before us, as it contains evidences of considerable practical acquaintance with the subjects of which it treats; and fair, but not remarkable, powers of arranging and describing them: it also appears to be free from illiberal and unprofessional expressions. But a man of Dr. Coley's good sense must be perfectly well aware that not the slightest shadow of benefit, but, on the contrary, much error and anxiety on the part of parents, and much embarrassment and difficulty on that of medical men, would accrue from the successful introduction of a work of this description to the non-medical public. The physician who addresses to the public a work in which the prevention of disease is alone discussed, may, if he perform his task ably and judiciously, confer a true benefit on humanity; but not one-fiftieth part of the contents either of this or of any others of the works thus put forward as candidates for popular applause, is devoted to prophylaxis. Every practical medical man is aware that the most irrational and most intractable patients are those who have had the misfortune to gain a little smattering of medical knowledge from popular works; and yet men of experience, and even men of high standing in the profession, are continually proving themselves so recklessly self-interested as to thrust works of this description into the hands of those hosts of weak-minded old women, and fanciful dyspeptics, who constitute the large body of amateurs in physic.

One remark upon a portion of his medical doctrines, which appears to us to be extremely dangerous, and we leave the work of Dr. Coley with a sincere wish that he had been satisfied with dedicating it solely to professional readers.

About a twelvemonth ago we reviewed a work in which it was argued, with some justice, that, in the generality of diseases of infants, bloodletting is inadmissible: Dr. Coley adopts altogether contrary tenets, and appears to treat the inflammatory affections of children with a degree of heroic vigour which many judicious practitioners hesitate to adopt even in the cases of the most apparently healthy adults. In the treatment of pneumonia, pleurisy, pericarditis, and other inflammatory diseases of children, (and the youngest infants do not appear to be excepted,) the author recommends bleeding to syncope from a large orifice, the venesections to be repeated again and again should the symptoms not be sufficiently relieved by the first bloodletting. In several infantile diseases he also recommends the use of the most violent purgatives in large doses, without the slightest qualification with regard to the age of the patient. Doses of senna and salts, which no infant intestinal canal could bear with safety, are frequently prescribed; but at page 340, the author surpasses himself: here, after advocating the employment of digitalis in the dropsical affections consequent upon "subacute carditis," he recommends that the operation of this medicine should be assisted by the action of drastic purgatives; and adds:—

> "One of the best medicines for this purpose is elaterium, which may be given once in two or three days, either in a full dose, from a quarter to half a grain, or in smaller doses, repeated every three or four hours."

Half a grain of elaterium administered every second or third day to a diseased infant, for the purpose of assisting the action of digitalis! Dr. Coley must have practised among the children of the Anakim: ordinary human infants have never been able to bear such discipline as this.

Practical Surgery. By ROBERT LISTON. Fourth Edition. 8vo. pp. 582. London: Churchill. 1846.

THE reputation of the work before us has long been worthily acquired: the number of editions which it has passed through afford a test of the estimation in which it is held by the reading members of the profession, and the sound practical utility of the facts with which its pages are stored affords the reader convincing proof that such approval has not been gained upon slight or insufficient grounds. One of the great merits of this work appears to us to be, that it does not profess to contain a complete system of practical surgery—that it is not assumed to be more than a systematic record of some of the most useful and interesting of the observations which have been made by a practical surgeon during his professional career. The larger number of works on the practice of medicine and surgery, while professing to contain the entire art and mystery of the subject, disappoint us by their want of completeness, by the gaps and deficiencies which blemish them throughout, whereas a desultory work of this description — treating principally of those subjects to which the author has particularly directed his attention, and not pretending to any elaborate researches—is rendered interesting and readable from the ease of its style, and does credit to the author for not engaging in the vain attempt of collecting into a single work the entire facts of a science the details of which are almost infinite.

Although the bock has reached its fourth edition we have marked for extractseveral passages whichare new, and a few others which, although less novel, require to be repeated until the importance of the facts which they convey is sufficiently generally appreciated. We apprehend that the following caution has a practical origin, although we are not aware that the accident against which it is intended to guard has ever occurred.

"After the application of a ligature to a vessel of the first class—the carotid, subclavian, or iliacs—it is advisable to leave both ends hanging from the wound. Though the knot is properly made and firmly drawn, the surgeon may have misgivings as to the risk of the ligature becoming slack, and of the knot becoming undone, by the constant and forcible impulse of the blood. In many cases it is desirable to diminish the size of the foreign bodies in the incision, in order that the excitement and discharge may be as slight as possible: with this view it may be considered proper to remove one end of the threads, or perhaps to take away both. In some cases it will be a judicious and safe procedure to apply a third knot, taking care that this shall be made after the fashion of the others, the two ends coming out evenly and opposite each other, without any awkward twist. The advantage gained by taking away one of the ends, in a case where but one ligature is employed, may be but very slight. If a foreign body is to be left hanging out throughout the whole depth of the wound, it matters little whether it be composed of one or two threads." p. 23.

The following is the author's experience of the effects of ligatures in the division of structures, where incision is not advisable:—

"The division of parts is occasionally to be effected with propriety and safety only by the employment of ligatures. Sinuous tracks at one time were so laid open; and many good surgeons, as Desault, pursued this plan in fistula in ano. I have, in some few cases, followed the practice with advantage in abscesses of a chronic kind by the side of the bowel, and in cases of fistula where the patient was alarmed at, and averse to, the employment of cutting instruments. In a case which presented lately, of very complete congenital phymosis, in a gentleman of highly hæmorrhagic diathesis (the males of his family had all shewn the same disposition,—some, in fact, had died of uncontrollable bleeding), I considered it a more prudent plan to pass a ligature through the prepuce by the side of the frænum, and by tightening it to cut through the covering, than, under such circumstances, to resort to the use of the bistoury." p. 28.

It would certainly have been more satisfactory had the author mentioned the effects of his contrivance in the above case, which was certainly a severe test of the power and safety of the ligature. The author considers that the platinum ligatures which were so much in use some years ago possess no advantage over those of silk or thread. We have seen them applied for the closure of all descriptions of wounds, and are convinced that they possess the advantage of not being liable to ulcerate out as—all other ligatures are liable to do—except, of course, where they are improperly tightened, or the parts are put unduly on the stretch. They have, however, the disadvantages of occasioning great pain in their introduction, and of producing slight ulceration of the parts which they traverse, which gives the cicatrix a rather unsightly appearance, a matter of great consequence in cases of hare-lip, &c.

Mr. Norris, of Philadelphia, who has edited the American edition of this work, has given some judicious observations upon the injudicious practice of applying a tight bandage to a recently fractured limb. As we have seen more than one extremity sacrificed, and much intense agony produced by this unscientific plan, and as we believe that it is, even now, frequently practised, especially in cases of fracture of the olecranon, we subjoin Mr. Norris's remarks.

"A number of examples have been presented to me of great suffering in consequence of swelling following the application of a roller to recent fractures, even when scientifically applied; and in two instances I have witnessed mortification and loss of the limb follow it. A patient in robust health, and of temperate habits, was admitted into the Pennsylvania Hospital on the evening of December 18th, twenty hours after the receipt of a simple fracture of the humerus, situated just above the condyles. He complained of great pain in the whole limb. The arm was enveloped in splints, and a well-applied roller of the ordinary width, extending from the hand to the axilla, which were at once removed" (that is, the roller and splints were removed, not the hand and the axilla). "The limb, which was excessively swollen, red, and very hot, was elevated, and evaporating lotions applied to it. By the following morning gangrene of the hand and fore-arm had taken place. This extended up as high as the insertion of the deltoid, where a line of demarcation was formed, and the arm was successfully amputated. The second case was a compound fracture of the lower end of the radius, received at the hospital from the country five days after the accident. A bandage well applied, and splints extending from the palm of the hand to the elbow, had been put on within an hour of the injury. On removing them after admission, the soft parts around the fracture were found to have sloughed. An abscess extended up to the elbow-joint, and sloughs existed over the condyles. Severe constitutional symptoms arose, making amputation of the arm necessary. In fractures about the wrist-joint great tumefaction is particularly apt to occur; and I have seen so much suffering occasioned by the immediate application of a roller in these cases, that I am now in the habit of applying the splints for the first few days loosely to the arm, without the previous application of a bandage, and in all cases in which fractures of an extremity occur in the country, in such situations as will prevent it from being frequently visited, it is better to omit the application of a bandage directly to the part at the first dressings, and simply give support to the limb by long splints, well padded with cotton, attached to the member by means of a roller moderately tight." pp. 72-3.

In cases of disunited fracture Mr. Liston has found *the introduction of* a seton between the ends of the bone more successful than any other plan. The mode he has pursued has been to pull about the parts a good deal at first, to introduce a larger and a larger seton, and to remove the foreign body at the end of a few days, eight or ten; —so soon, in fact, as a considerable degree of excited action has arisen in the bone and periosteum, and before it has begun to decline; the limb is then put up with great care, and every chance of the slightest motion guarded against. If the bones do not overlap it will be advisable to make an attempt to put them in that position; a short and firm limb being more serviceable than one that dangles about, weak and unsupported by the muscles.

The following caution is, we fear, not attended to even by some who deserve to be designated as good surgeons, who do not hesitate to stretch and handle an artery which they have isolated and raised on their aneurism in a manner which is only warrantable in operating upon the dead subject.

"There must be no elevation of the vessel on the handle of the knife, or on the director, as if in triumph at the almost unexpected success of finding it. Ulceration of the vessel, and secondary hæmorrhage on or about the separation of the ligature, are the almost inevitable consequences of the proceeding here reprobated."

The author speaks with great scorn of "that absurd tool, a silver knife—another refuge of nervous and unskilful operators." The author is certainly correct in his view of the ill effects which may result from the too extensive separation of the tissues surrounding an artery by instruments of this description: still he must be aware that instances will occur in which very indifferent operators are called upon to perform severe operations, and we certainly think that, in such hands, the argentum is preferable to the ferrum, when the isolation of a great artery is the matter required. We are certain that, should it ever be our lot to have an artery tied by a gentleman whose steadiness of hand we had not previously any means of testing, we should, in the very first place, make a point of exacting from our friend a solemn promise that, so soon as his fingers reached the vicinity of the peritoneum, pneumogastric, or internal jugular, as the case might be, he would have the goodness to lay aside the scalpel, and make very cautious use of the "absurd tool" in separating the remaining tissues.

We trust that the justice of the following remark is now admitted by every surgeon.

> "From the fatal results that have always followed ligature of the innominata, few surgeons would now be found sufficiently hardy to undertake such an operation; and there are no circumstances that will warrant the surgeon putting the patient to the pain and risk of an operation which will in all probability prove fatal, perhaps sooner than the disease for which it is undertaken."

The following opinions upon the operations of lithotomy and lithotrity will be read with interest:—

> "The operation of lithotomy must yet continue to be performed on children, and on those of mature age who are so ill informed as to permit the stone to attain an inordinate bulk. The concretions in young subjects are generally composed of a very dense substance, the oxalate of lime, in whole or in part; and the urethra is often so narrow, as to preclude the application of instruments strong enough to reduce them to fragments. The reasons for giving a preference to incision over crushing, when the stone is large, have been already given."
>
> "This favourable opinion of lithotrity" (this refers to remarks in previous pages) "was published in 1840; since then it has been confirmed and much strengthened by ample experience. Of late years, in point of fact, I have scarcely been obliged to have recourse to lithotomy at all in private practice. At the hospital, patients yet present themselves with large stones and bad bladders. Then lithotomy is both a less painful and much more safe operation, as already propounded. During the above period twenty-four patients have been cut, and all have recovered without accident; these patients have been of all ages, from two to eighty years, and some of them not over-favourable subjects. So that, after all, there is not much to find fault with as regards this 'cruel and bloody operation' when carefully set about." p. 505.

The various alterations and additions which this work has undergone in its several editions, have added much to its completeness; still a few oversights appear here and there, which ought not to occur in a fourth edition. Thus we find the author maintaining the view that the experiments of Sir A. Cooper, in securing the carotids of *animals, proved* that similar operations upon the human subject are not liable to produce any injurious effect upon the cerebral circulation,—an opinion which has now been disproved. The distinguished recorder of those experiments is also spoken of as "still zealous as ever in the advancement of science,"—an expression which assigns the last revision of this passage to a rather remote period. We also observe that the mode of performing paracentesis thoracis recently advocated by Mr. Edward Cock, in the Guy's Hospital Reports, is recommended by the author as due to Mr. Edward *Cook*.

The book is, however, too valuable to be injured by such blemishes as these. It is precisely the kind of work which the student should read—in conjunction with Brodie's Clinical Lectures and Colles's Lectures on Surgery—when he has gone through the ordeal at the College, and begins to study to *remember*—not to *pass*.

A Practical Manual; containing a Description of the General Chemical and Microscopical Characters of the Blood and Secretions. By J. W. Griffith, M.D. F.L.S. &c. Small 8vo. pp. 168. London: Taylor.

We have here the second part of Dr. Griffith's Manual, which is chiefly devoted to the description and analysis of the blood and bile. The only objection which occurs to us in looking through the pages of this little volume is, that the author has perhaps attempted to introduce too much into a small space. Nevertheless, we are not inclined to regard this as a very grave offence: the size of a book is by no means a criterion of its merit; and the style adopted by Dr. Griffith is so concise that if it were required, it would be easy to build up a large and imposing octavo upon the basis of this manual. The work is, however, obviously intended as a guide for students, and for those practitieners who may have omitted to keep pace with the rapid progress of modern organic chemistry. It would be going too far to say that they will find here a description of every fact, chemical, microscopical, physiological, and pathological, connected with the blood and secretions; but they will meet with a very judicious selection of those facts which are well established by experiment, and which have a direct bearing upon practice. There are some unreasonable persons who expect to find in a small manual all that is contained in a bulky treatise, published at four times the price. To such Dr. Griffith's volume will probably appear meagre and unsatisfactory.

From our examination of this manual it appears to us that the author has brought together in a compendious form many useful processes and methods of analysis required for the examination of animal compounds; and with a few trifling exceptions his descriptions are correct. We have been particularly pleased with the account of Trommer's test and its modification by Cappezuoli, for the detection of sugar; also with Pettenkofer's test for the detection of bilic acid. To the student who is desirous of acquiring some facility in the application of tests for determining the existence of pathological changes in the secretions, we can recommend Dr. Griffith's book as a useful little guide.

A Guide for the Proper Treatment of the Teeth, &c. By W. K. Bridgman. Small 8vo. pp. 88. London: Churchill. 1846.

A work rather adapted for the public than for the profession. We have looked through the pages without finding any facts or opinions which require particular notice. It is one of the numerous class of "Dental Guides" with which our readers must be familiar.

VINEGAR IN POISONING BY OPIUM.

The British American Journal contains some remarks on a case of poisoning with tinct. opii, where vinegar was given as an antidote in two-ounce doses every half hour. Under this treatment the *speechlessness* of the patient increased, and the drowsiness augmented, corroborative of the now universally received opinion, "that (in the words of Professor Christison), in poisoning with metallic compounds, vegetable narcotics, and very many vegetable irritants, where it was once almost invariably used, it does harm for the most part instead of good, because it aids the solution of the active part of the poison."—*Northern Journal of Medicine.*

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

Mr. Dendy, President.

Monday, October 12th.

Mr. Pilcher related the following

Case of Diabetes.

T. M——, aged eleven years in July 1845; tall (five feet); had suffered pain, with occasional limping in the right knee, which was relieved by iodine and pressure; was active in mind and body, although pale, and having an appetite very variable for twelve months; urine, voided in considerable quantities, was frequently passed in the bed and in his trousers; for the last three or four years he had been subject to bleeding from the nose, in consequence of which he was placed at school at Hastings, and took extra meat, porter, and sea-bathing, with apparent benefit; for the last two years and a half has been to school in the neighbourhood in which he resided. In September, 1843, he had remittent fever, commencing with epistaxis, from which he recovered by taking quinine and infusion of roses. In autumn, 1844, had chicken-pock very mildly. In the beginning of December, 1845, he presented symptoms of illness, looking pale, and complaining of weakness; yet was active enough to race and run in the garden, &c. Action of kidneys was not observed, but now suspected to be inordinate. He now took quinine and sulphate of iron in grain doses, which produced symptoms of head affection. The treatment was then changed to sulphate of iron and sulphate of magnesia. A dose of blue pill and compound rhubarb pill appeared to relieve him, and give him a more healthy aspect; hence he was ordered calomel and black draught, which seemed to weaken him, although they acted upon the bowels but slightly. The muriated tincture of iron produced headache, when he had continue to take it for three or four days in doses at first of five drops, increased to seven and ten, three times a day. During this time, he was taking plenty of animal food and malt liquor; was cold, and had frequent shivering, with furious action of the heart; and, because he could not be restrained from inordinate exercises, was confined to his bed. This occurred three weeks before his death.

Feb. 6th.—He was ordered to take one grain of quinine, five minims of tincture of digitalis, five minims of tincture of opium, one drachm of compound tincture of cardamoms, and an ounce and a half of infusion of roses, every four hours. He continued this for three days, apparently receiving benefit from it. The action of the heart was less, and the water diminished in quantity; appetite still great; bowels confined.

10th.—He was ordered twelve grains of rhubarb in the morning, and afterwards one grain of blue pill, and four of compound extract of colocynth. Bowels not relieved; but rhubarb made him sick. An injection was administered, which had the desired effect, and gave some relief to the stomach, which, however, never quite recovered its quiescence. This day a professional brother saw him, and ordered him the above aperient medicine. He was of opinion that the disease was in the kidneys, but that the liver was loaded.

12th.—He was ordered the quinine and infusion of roses, without opium and digitalis; took three drops of laudanum at night.

13th.—Castor-oil operated well; continued the quinine and infusion of roses, with half a grain of blue pill, half a grain of ipecacuanha, and half a grain of iodide of potassium, every night for three nights. During these three days was occasionally sick.

15th.—Was on the sofa; made a hearty tea; was seized with spasm, referred to the heart, for which was given digitalis and opium, which he continued on the 16th and 17th. On the last day, took chicken and porter.

18th.—Took sea-kale and sweetbread, with toast and water, which made him sick in the morning.

19th.—Was faint, and exceedingly sick, with spasms threatening death; took wine-and-water; was ordered a grain and a half of calomel, half a grain of iodide of potassium, and half a grain of opium, without relieving these symptoms. A blister was applied over the chest; passed a quiet night, taking whey every hour.

20th.—Sick, with constant pain and spasm in the throat; could not swallow anything, not even saliva; took half a grain of morphia.

21st.—Severe fainting; spasm in throat continuing, was relieved by cold ablution; took another dose of morphia, also laudanum; the former retained with brandy-and-water; a tea-spoonful of brandy by itself.

Mr. Pilcher saw him this evening (21st), and administered an injection. He was constantly sick, with hiccough; countenance pale, yet with muscular strength. Took no medicine during the night, but a little whey, &c., which was generally returned; bowels have not been acted upon for five days.

22nd.—Morning. Injection partially retained; bowels have still not acted; another with olive oil administered, but with no better success; a third, given with castor-oil, which brought away hard scybalæ, without relief to sickness; was able to retain a little jelly, tea, with isinglass and chicken-broth.

23rd.—Had a quiet day, taking two grains of sesquicarbonate of soda, and an eighth of a drop of hydrocyanic acid, when sick, viz., every two hours. An injection again brought away hardened pieces of fæces; a second produced no effect; took barley-water and milk frequently; had bad night.

24th.—Was faint all day, and exhausted, taking ammonia and opium, with beef-tea, arrow-root, eggs, and brandy, as much as he could take. During the day he took half a pint of brandy; rallied under this, and slept in the day; woke at eight and ten; blister on the stomach. Did not sleep after eleven o'clock at night, when he became again prostrate; was restless, jumping up, taking stimulants, which he was able to retain. Became comatose, after a paroxysm of screaming and convulsions.

On the 25th, at six o'clock in the morning, again rallied. Supposed to be dead at seven o'clock. Breathing returned, and continued laborious and distressed until eleven o'clock, when he died gradually.

Dry cupping at back of the neck, or altered position, seemed to relieve him. All this time the urine was abundantly secreted, and after convulsion, voided a large quantity in bed, about three quarts in twenty-four hours. No evacuation from bowels since the 23rd. Perspiration has always been excessive, particularly at night, and upon the least exertion; and during his last illness (especially on the 10th) ran from him in streams. He had hooping-cough in 1839 very severely; measles in May, 1837, very badly. Gums have always been noticed to bleed without apparent cause.

Examination four days after death.—On opening the chest and abdomen, the viscera presented normal appearances. The lungs pale on the upper surface, healthy and bloodless. Pericardium slightly distended with fluid. The cavity of the pleura on the left side contained about two ounces of dark-coloured serum; on the right side about six ounces. The heart was healthy in external appearance; on the anterior part of left ventricle, a fatty growth, about the size of a pea. Liver healthy; gall-bladder distended with bile, which discoloured the liver and the duodenum; spleen healthy; stomach healthy; mesenteric glands a little enlarged from a pea to a horse bean. The sigmoid flexure of colon distended with gas. Rectum contracted; bladder fully distended. Left kidney unusually large, one-third more than its natural size, pale and firm. Appendix vermiformis very long. Right kidney rather thicker, but not so long as the left; the inferior border dark, hard, and firm, and more congested than its fellow. Mucous membrane of bladder very pale. Neither ıe spine nor brain was examined after eath; the former, previous to dissolntion, ad shown no sign of any disease.

A portion of the kidney had been placed nder the microscope, and examined by r. **Golding Bird**, who observed, that ıe general appearance of the kidney and the esh cut surface was anæmic; in a few spots nly was there any appearance of congestion, ad chiefly on the external parietes, probably ising from the great distension, or even iving way of a Malpighian body, a condition ıst possible, as some few of the tubuli in ıe patches alluded to were impacted with pithelial cells. In all other parts of the rgan the tubuli were remarkably thin, and ecidedly of larger diameter than normal, ıeir walls being nearly transparent, and ıere was not a fat globule to be seen. The pithelial cells were by no means closely acked; indeed, the whole appearance of the ıbes suggested the idea that they were in ıe best possible condition for allowing the ıpid filtration of fluid through their walls. he microscopic anatomy of the kidney thus mpletely agrees with the excessive exuda-on of urine during llfe.

Dr. **Garrod** had examined the urine creted by this patient. He found the diment to be composed entirely of uric acid ı a crystalline form. He never remembered ı have seen so much uric acid as existed in ıis urine, thirty times the normal quantity eing present. The specific gravity was 012, and it was rather more acid than ıtural: otherwise the urine was normal, ıough in quantity it was three quarts in the renty-four hours instead of one quart. The nsequence was, that though in a given ıantity there was not more than the proper roportion of urea, of course the large pro-ortion of urine increased the real quantity f urea secreted. There was no oxalic acid, xalate of lime, or sugar. Before knowing ıe history of this case, he had observed, in communication to Mr. Pilcher, that this rm of urine sometimes occurred in children f debilitated and gouty parents,* and that ı the aggravated form of the diathesis, reat irritability of stomach existed, with isturbance of the function of the heart, as e frequently saw in asthenic and irregular ʋut in adults. In addition to what he had en said, he might now observe, that he ad, in some cases of anæmia, seen a great cretion of uric acid, urea, &c. The case nder discussion appeared to be one of ex-ggerated anæmia.

Mr. **Pilcher** inquired whether it could e said that there was a name to the disease; and if detected early, what plan of treatment would do good? In this instance, he believed that this patient had suffered from the affection from birth, and that its presence was not even suspected until it was too late. He considered it a mere functional disorder, consisting of an inordinate action of the kidney. Why there was such a great secretion of uric acid he could not tell.

Dr. L. **Stewart** believed that it was a fnnctional and not an organic disease. In diabetes, usually, the skin was very dry; whereas, in this case, it was occasionally bedewed with great perspiration.

Dr. **Bennett** inquired if the opium given diminished the quantity of urine, and whether there was any suspicion of the disease having been induced by onanism?

Mr. **Pilcher** said that the urine was diminished in quantity under a dose of opium and digitalis. There was no suspicion of onanism having had any influence in the production of the disease.

Dr. **Chowne** thought that the disease could not have existed very long without proving fatal. He made some general remarks on diabetes in connection with this case.

Dr. **Clutterbuck** regarded the disease as decidedly organic; there could not, in fact, be any disorder of function without some disorder of the organ connected with it. Taking all the circumstances into consideration, he thought the brain the original seat of mischief.

BRONCHITIS CAUSED BY THE PRESENCE OF A CHERRY-STONE IN THE AIR-PASSAGES.

A **woman**, 48 years of age, for about twelve months after having eaten some sour cherries, was subject to periodical attacks of severe cough, attended with bloody expectoration. These paroxysms, the intervals between which were sometimes almost a week, occasionally attained such intensity as to threaten suffocation, and were attended with constant burning, sometimes lancinating, pain in the chest, situated chiefly in the region of the third and fourth right costal cartilage. Eventually, these paroxysms terminated in a severe attack of bronchitis, which resisted all treatment. At length, when at about its height, and after a severe paroxysm of coughing, there was raised with the cough a round, smooth, white cherry-stone, which was crusted over with a layer of phosphate of lime, almost a line in thickness. This stone had probably been impacted for an entire twelvemonth in the right bronchus.—*Casper's Wochenschrift*, 1846.

---

* It was stated by Mr. Pilcher, in the course of ıe evening, that although this patient's parents ere free from gout, his grand-parents had suf-red from the affection.

Correspondence.

CASE IN WHICH A MUSKET BALL WAS ACCIDENTALLY SWALLOWED.

BY W. S. G. DAVIES, M.D. S.R.N.

Licentiate of the Royal College of Physicians, London.

Sept. 25th, 1846.—J. V. æt. 4 years, while at school playing with an elder boy accidentally swallowed a leaden bullet. The elder boy wanted to get possession of it, and a struggle took place between them as to who should have it. J. V. placed it in his mouth, and by an unlucky gulp swallowed it. The ball appears to have rested a few seconds at the inferior part of the œsophagus, where by its pressure on the trachea it was nearly producing suffocation. The schoolmistress seeing this, and hearing the cause, endeavoured to make him bring the ball up again; in this, however, she failed. The parents of the boy were much alarmed, but their apprehensions were quieted by my assuring them that no danger or immediate bad consequences would follow. I requested that no medicine might be administered, and that they would use every care, daily to examine, and see when the ball should pass with the alvine evacuations. At the end of a week it had not made its appearance; but the little patient felt no inconvenience: he was as lively as if nothing had happened.

Oct. 2d.—The bullet was brought to me somewhat roughened in the exterior by its passage through the body. I weighed a similar bullet cast in the same mould, and allowing them to be nearly the same in weight compared the two, with the subjoined result. No inconvenience or indisposition has resulted since, and the subject remains well up to this day (10th inst.)

Fig. 1.

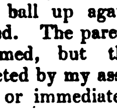


Fig. 2.

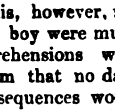


Fig 1.—The *rough* ball or bullet after ten days' retention; 5½ drachms.

Fig. 2.—The smooth ball of the same size, made in the same mould; 5 drachms, ℈ij.

I take this opportunity of mentioning also another case, which happened some few months since, in a girl of about 16, who swallowed a long needle, when it passed in exactly the same period—namely, on the 10th day.

48, Regency Square, Brighton,
October 10th, 1846.

Medical Intelligence.

THE PRESIDENTSHIP OF THE ROYAL SOCIETY.

In the *Lancet* of the 10th inst. it was stated that the Marquis of Northampton had resigned the presidentship of the Royal Society. The noble Marquis has addressed to the editor of the *Times* the following letter on the subject.

Sir,—My attention having been directed to an article in the *Lancet* full of mistakes and misstatements, I take this opportunity, afforded to me by your columns, if you will give me leave to do so, to contradict the report that I have resigned the office of President of the Royal Society.

It is neither necessary nor right for me to enter upon the other assertions contained in this paragraph; but the well-known fact that I have been long anxious that the anniversary of the Royal Society should be held at a more convenient time than the 30th of November, my observations on that subject in my last year's address to the society, and the introduction of discussion on papers, and other changes during my presidency, and with my entire concurrence, will show to the readers of the article in question how much accuracy they may expect in its other statements.—I am, sir, your humble servant,

NORTHAMPTON.

Peterborough, Oct. 13th.

ANIMAL MAGNETISM—CLAIRVOYANCE.

The following astounding instance of clairvoyance is reported in the *Gazette des Hôpitaux* to have occurred recently in Paris. It deserves the attention of Lord Ducie and the patrons of the new Mesmeric Infirmary:—A young man employed in the Museum of Natural History in Paris had been repeatedly invited by a credulous friend to witness the proceedings of a celebrated female somnambulist, and on this occasion he formed one of a large and brilliant assembly, all anxious to witness the powers of the pythoness in predicting the nature, prognosis, and treatment of diseases. A young physician was seated at a table, industriously engaged in transferring the oracular responses to paper.

The official of the Museum of Natural History, when his turn arrived, handed to the somnambulist a packet containing a lock of hair carefully wrapped in paper. The somnambulist removed the hair from the paper, smelt it, felt it, examined it closely with her fingers, and successively applied it to her forehead, occiput, and epigastrium. She then suddenly ejaculated, "Light hair of a child,—the child very ill,—last stage of phthisis,—no hope of recovery; remedies to be used, &c.," running on with a long list of medicines, which the attendant physician wrote down in a proper and becoming manner.

The gentleman who had handed the hair for examination appeared much alarmed at the prognosis, put the prescription into his pocket, and then took an opportunity of announcing to the audience that this lock of light hair from a phthisical child had been that morning cut from *a young and healthy camel* in the menagerie! He then made his escape as soon as possible.

PHARMACY IN PRUSSIA.

The Prussian Government has just issued a regulation with respect to the practice of pharmacy in Prussia. Henceforth no one will be allowed to keep a shop for the dispensing of drugs until he has passed two years in studying at one of the universities. When will this important branch of practice be placed under proper legal restrictions in Great Britain?

GREAT MORTALITY IN BELGIUM.

The deaths among the children of the poorer classes are at the present time very numerous in Brussels. The cause of this mortality is chiefly to be ascribed to attacks of dysentery, bearing some resemblance to cholerine, but more manageable under treatment. Small-pox and measles are also very prevalent and fatal. Typhus fever is committing great ravages at Ypres, Wytschaete, and Hoogezieken.

THE VICTIMS OF THE PLAGUE AT MARSEILLES (1720).

Many skeletons have been lately discovered at Marseilles during the excavations required for the construction of a railroad. The bodies appeared to have been all heaped together confusedly, and above and below each other was a stratum of lime. On disturbing this, the exhalations compelled the workmen to desist for a short time from their work. More than fifty cart-loads of human bones were thus removed for re-interment at the cemetery. The identity of them as the remains of the individuals who were cut off by the great plague of 1720 appears to have been clearly made out by the discovery of coins among the bones as well as in the pockets of the dresses of some of the dead, bearing date 1717, 1718, and the latest, 1720. One of these coins (dated 1720), found in the fragments of a dress, was as bright as if it had been struck only the day before. The confused disposition of the bodies, and the fact of their being buried in large numbers with their clothes, and with money about them, leave no doubt that they are the remains of some of the victims hurriedly interred *at the time of this* great calamity, the horrible traditions connected with which are still familiar to the inhabitants of Marseilles.

A HOMŒOPATHIC CONGRESS IN LONDON.

We read with astonishment in our contemporary the *Gazette des Hôpitaux*, that there has recently taken place in London a great meeting of *six hundred* homœopathic physicians, under the presidency of Lord Grosvenor. The French homœopathists have also had a congress, and we are informed that they devoted several days to the discussion of their doctrines. It is also stated that a homœopathic society has been recently formed at Madrid. *Ou diable la médecine va-t'-elle se nicher?*

CASE OF POISONING BY THE ROOTS OF THE PARSNIP.

Dr. Unger, of Tozemesno, records the following case: — In March, 1846, a woman dug up some parsnip roots which had been planted in her garden the preceding spring. They were dressed for dinner as usual in an earthen-pot in which her food was commonly prepared. This woman, as well as her husband and two children, partook of them. Dr. Unger was suddenly called to see these persons in the evening, and found all of them labouring under *delirium tremens*. They were in constant motion, talking incessantly, without knowing what they said, and fancied that they saw objects which had no existence. They fought with each other, and were occasionally attacked with fits of convulsive laughter. The countenance was pale, the pupil dilated, the look vague, tongue clean, moist, and trembling, and the pulse, which, owing to the incessant motion, was felt with difficulty, appeared smaller, weaket, and slower, than natural. The patients rejected everything that was offered to them, and were obliged to be restrained by force. A neighbour who had eaten a small portion of the roots suffered from vertigo and general uneasiness. She was, however, perfectly conscious, and refused to take any remedy. Doses of sulphate of zinc were repeatedly given to the other patients, but without effect, until combined with ipecacuanha. This treatment led ultimately to the rejection from the stomach of a large quantity of the undigested root of the parsnip. After this, the symptoms abated; and the next morning, with the exception of a sense of weight in the head, they had all recovered. It is remarkable that there was no purging.—*Gaz. des Hôpitaux, Sept.* 19.

Dr. Unger thinks that, owing to the roots having been allowed to remain for a long period in the ground, they had acquired properties like those possessed by the wild plant. Is it quite certain, however, that there was no mistake,—that they were not the roots of the œnanthe crocata, or some other poisonous vegetable?

PHOSPHORESCENCE OF SEA-WATER.

MANY scientific theories have been brought forward to account for the phosphorescent appearance which is often presented by sea-water, especially in warm latitudes. Professor Marbach, who wrote upon this subject in his Encyklopædie, some years since, stated that by filtration, of phosphorescent sea-water lost its luminousness, —the phosphorescent matter being retained on the filter. It is now satisfactorily ascertained, that the light is derived from the bodies of myriads of acalephæ or jelly fishes. These animals, which are so small and numerous that, according to calculation, from thirty to forty thousand must exist in every cubic foot of sea-water, are so transparent, that their bodies cannot be seen in the day-time. According to Mr. T. R. Jones they are so translucent that they cannot be seen by the microscope. The ocean teems with them: vessels have been known to sail through a sea abounding in them for days, weeks, and months together! It is by no means improbable that these acalephs may serve to light up the fathomless abysses of the ocean. Their bodies are only visible in darkness, and as they have no perceptible nervous system, it is a somewhat difficult problem to determine by what means the phosphorescent light is evolved from them. The reader will find some interesting facts connected with this subject, in Mr. T. R. Jones's *Natural History of Animals*, vol. i. lately published.

OBITUARY.

ON the 7th inst. at Grays, Essex, in the 31st year of his age, H. A. Meeson, M.D. Dr. Meeson had studied his profession at Guy's Hospital for a period of eight years, and had distinguished himself by his knowledge of Chemistry. He was formerly a contributor to this journal. For some years past he had withdrawn from the practice of his profession.

AT Sukkur on the, 25th July, in the 31st year of his age, William Braikenridge, Assistant-Surgeon in the East India Company's Bombay service, acting as surgeon of the 11th Bombay Native Infantry.

Selections from Journals.

MIDWIFERY.

CASE OF IMPERFORATE UTERUS OCCURRING IN A SECOND PREGNANCY. BY DR. R. W. WRIGHT.

ON the 29th of October, 1842, at noon, the narrator was requested to visit a stout-built Irish woman, æt. 28, in labour of her second child; he was informed by the midwife that she had had strong pains the preceding evening, and that there was no shew. On examination he found the pains urgent and powerful, and bearing down a round, tense, globular tumor into the vagina, giving the impression of the child's head forcing down the uterus before it. Every part of the vagina was carefully examined without discovering the os uteri; the head being low down facilitated the thorough examination of the canal and its contents. About the spot where the os should be, was felt a firm hard point, with three lines or ridges diverging from it; one towards the sacrum, and the other two laterally towards each groin. To the finger these felt like cicatrices, and on inquiry it was found that two years before she fell down stairs, during the 4th month of her first pregnancy, and was immediately seized with pain and flooding, which lasted for two days; when, not getting better, a medical attendant was called, who without any delay applied instruments, and delivered; the application of these produced great pain, and was followed by dreadful flooding, fainting, &c. &c.: from these she rallied, and after enduring great pain and fever for some days, discharged purulent matter along with the lochia; for many months this discharge continued in diminished quantity, but never disappeared, even when the catamenia came on, which was every month; has not seen any matter since this second pregnancy. The pains being very strong and frequent, it was resolved to quiet them, as far as possible, by opiates given by the mouth and rectum, till further aid could be had, or nature perform her own *cure*. The patient was closely watched, and on examining her, the os uteri was often sought for, lest it should be high up towards the promontory of the sacrum, as in cases of anterior obliquity of the uterus, but in vain. During the afternoon and night the pains were almost stopped by the opiates; at 7 A.M. they returned in their former frequency and strength, and, at noon, were accompanied with such bearing down as threatened a rupture of the womb; the opiates were repeated and rejected. While supporting the uterus against the force of the pains, Dr. Wright's fingers happened to be on the point before spoken of, when suddenly he felt something tear under them, and, after a couple of pains, he passed the point of the index finger into the rent, which had taken place close to the point, and was now made larger and larger by each successive pain, producing three rents in the same direction as the three lines before described; these rents had rough edges, and bled very little. At 5 P.M., the opening being sufficiently large, the membranes burst: the head not advancing at all for three hours, and the patient complaining of ldiness and headache, the forceps were ap- ed, and a full sized healthy child was born : ; extraction of the placenta gave no trouble , r during the whole labour was there flood- ;. In ten days she was up and about her use, with only a slight purulent discharge, ich entirely disappeared in another week. ·*Montreal Medical Gazette.*

SURGERY.

WO CASES OF ANEURISM CURED BY LIGATURE OF THE FEMORAL ARTERY WITHOUT CONFINEMENT TO BED, TERMINATING FAVOURABLY.

BY J. KIRBY, ESQ.

:NCE the period in which it was satisfac- rily ascertained that ligatures should in- ice a certain amount of division in the nics of an artery to secure their successful plication, all operators have experienced uch anxiety about the degree of force ey employ when an artery is being tied, pecially in cases of aneurism ; but more is teemed necessary than the due adaptation ' force for the purpose of ensuring a fortu- ate result. Repose is strictly enjoined as i essential to union, and commanded with ich authority, that it appears as if the ightest infringement of this rule might de- at all previously well-executed proceed- igs.

The following cases are calculated to abate ie great solicitude which many, in common ith myself, have felt upon the latter sub- ct. How far the cautious precept may be eglected or opposed with surprising impu- ity, the practical reader may judge.

Case I.—Some years since, assisted by iy former pupils, Dr. Matthews and others, tied the femoral artery at the groin, in a ian residing in Wexford-street. He was oung and intemperate, and there was ob- cure evidence of morbus cordis, of which e died in a few years. He was a thin erson. The artery was easily exposed and adily secured, and matters being finished i the usual way, I felt quite satisfied iat the case was one of comfortable pro- iise.

The day was Sunday. Monday, and very succeeding day, I saw him morning nd evening. The thirteenth day, the liga- ure came away with the dressing, &c. and he wound was healed. I was now informed hat all my rules as to rest and quietness rere from the first neglected. Being sum- ioned to a police-office a few days before he operation, he left his house the day after t was performed, and walked about a mile o the court, repeating the journey every day or a week, during which his attendance was equired. My visits being always at the ame hours, he easily *carried on this decep- ion, of which one could not hold the least* suspicion, as he was always found mos comfortably and quietly settled in his bed.

Case II.—I assisted Mr. Mitchell in an operation for popliteal aneurism, performed in the groin. The patient was thirty years old, very plethoric, and very intemperate. Impatient of hospital restraint, he left on the third day, and nothing was heard of him until the fourteenth, when he presented himself in a state of intoxication, with the ligature dangling on his finger, and "wishing his joy to whoever might next be required to wear it."—*Dublin Medical Press.*

[Remarks. — Extremely interesting as the above cases are, as evidences of the remarkable manner in which severe injuries and operations are often recovered from even under the most adverse circumstances, they of course have no weight in proving that excessive caution has hitherto been employed in enjoining perfect tranquillity to patients thus circumstanced. Innumerable instances might be cited, in which persons have recovered from the most severe mutilations, although subjected during the whole period of their sufferings to the extremes of exposure, want, and fatigue : works on military surgery are replete with cases, in which soldiers, with shattered and mutilated limbs, compound fractures of the skull, or bayonet wounds of the severest kind, bore up through all the toils and privations of disastrous retreats, and appeared to benefit rather than to suffer from the excitement of the period. And we could mention not a few parallel instances to that of the Earl of Peterborough ; who, when at an extremely advanced age, undertook a long journey within a few hours after he had undergone the operation of puncturing the bladder for retention of urine, without inducing immediately fatal effects. Still, all these instances can merely be regarded as exceptions to the broad principle, which enjoins that complete bodily tranquillity is requisite for the completion of the healing process after severe injuries. We have not the slightest doubt that if this rule were not most scrupulously adhered to after all operations upon the large arteries, nine-tenths of the cases thus neglected would prove fatal.—Ed. Gaz.]

ANIMAL CHEMISTRY.

ON THE FORMATION OF FAT IN THE ANIMAL BODY.

The following fact, related by M. Köss, is valuable, when taken in conjunction with the recent discussions which have been held in relation to the formation of fat in the animal economy. A workman was killed on a railroad, just after partaking of a full meal, consisting entirely of bread and grapes. His body was subsequently examined. The process of chymification was found in full activity, and at those portions of the small intestines which the chyme had reached, the mucous membrane was found dotted with white points, which, on closer examination, were seen to depend on the presence of drops of oil in the epithelial cells surrounding the extremities of the villi. Here is an example of the abundant formation of fat from substances which, at the most, could contain but a very small quantity of fatty elements, being composed almost entirely of gluten, starch, and sugar.—*Encyclop. des Sciences Médicale*, Mars 1846.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, *Oct.* 9.—J. Ryan.—J. N. Harvey.—J. S. Lavies.—H. Day.—G. Oldham.—G. Nott.—H. Harrisson.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer .... 29·55
„ „ Thermometer[a] .... 53·5
Self-registering do.[b] ...... max. 86·5 min. 31·
„ in the Thames water „ 0· „ 58·

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·74: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 4·6° above that of the mean temperature of the month (48·9°). The extreme hebdomadal range in the self-registering thermometer was 55·5°.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 3.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	651	Males....	483	Males....	493
Females .	708	Females .	452	Females .	475
	1359		935		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	131
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	173
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	166
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	210
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and *Clapham*; Camberwell; Rotherhithe; *Greenwich* ....(Pop. 479,469)	255
Total	935

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	935	1000	968
SPECIFIED CAUSES	933	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	179		
2. Dropsy, Cancer, &c. of uncertain seat	127	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	153	151	157
4. Lungs, and other Organs of Respiration	222	313	294
5. Heart and Blood-vessels	31	29	27
6. Stomach, Liver, and other Organs of Digestion	93	70	72
7. Diseases of the Kidneys, &c...	9	8	7
Childbirth, Diseases of the Uterus, &c.	15	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	10	6	6
10. Skin, Cellular Tissue, &c.	7	2	2
11. Old Age	29	66	67
12. Violence, Privation, Cold, and Intemperance	58	27	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	3	Convulsions	50
Measles	5		
Scarlatina	21	Bronchitis	21
Hooping-cough ..	25	Pneumonia	52
Diarrhœa........	43	Phthisis	127
Cholera..........	3	Dis. of Lungs, &c.	8
Typhus	38	Teething	11
Dropsy	12	Dis. Stomach, &c.	5
Sudden deaths ..	21	Dis. of Liver, &c.	16
Hydrocephalus ..	31	Childbirth	9
Apoplexy	21	Dis. of Uterus, &c.	3
Paralysis	23		

REMARKS.—The total number of deaths was 65 below the autumnal and 33 below the annual average. In all the districts, the mortality was below the averages.

NOTICES TO CORRESPONDENTS.

The case forwarded to us by Mr. Henry Smith shall be inserted in the following number.

We beg to assure our facetious correspondent Dr. J. T. of R. that we know nothing of the Leicester Infirmary, the Leicester Journal, or its editor. The paragraph referred to was selected out of a long Report, as the only part likely to be interesting to our readers. Our correspondent appears to entertain a mortal aversion to a medical school being attached to an hospital or infirmary. We can only regard this as a strange prejudice; since we do not see how a race of well-informed medical practioners is to be raised, except by allowing students to have access, under proper restrictions, to the wards of public hospitals and infirmaries.

Dr. T. Chambers's care of Diabetes will have early insertion.

DENTAL SURGERY.—Mr. J. DURANCE GEORGE will commence a Course of Lectures on Dental Surgery on Tuesday next, the 20th inst. at 6 o'clock P.M. The course will consist of 16 Lectures, and may be attended by Gentlemen who are not Students in other Classes of the College. Days of Lecture Tuesdays and Thursdays, at 6 P.M. Fee, £1. 1s.

ROBERT LISTON,
Dean of the Faculty of Med.
CHAS. C. ATKINSON,
Secretary to the Council.

University College, London,
Oct 13, 1846.

3URY INFIRMARY.—

a HOUSE-SURGEON. No married
apply, nor any person who has not
Examination before the College of
ıd at Apothecaries' Hall.
xamination and Character must be
sufficient testimonials. His Salary
annum, with washing, lodging and
the house, to which a gratuity will
the end of the year if the office be
o the satisfaction of the Governors.
and Statutes to be observed by the
eon and Apothecary, may be known
on to the Secretary, by letter, post

.on will take place at the Infirmary,
', the 26th day of November next, at
noon.

By order of the Special Court,
16. W. D. Whitmarsh, Sec.

ATHOLOGICAL SOCIETY

DON.—The members of the Society
informed that the First Meeting will
at the Society's Rooms, 21, Regent
erloo Place, on Tuesday, October the
M. precisely.
)rder of the Council,

Edward Bentley, M.D. } Hon.
Nathaniel Ward, } Secs.

' DEFORMITIES, by W. J. LITTLE, M.D.

41 Wood Engravings, price 12s. cloth,

ATISE on the NATURE of

.FOOT and ANALOGOUS DISTOR-
cluding their Treatment, both with
: Surgical Operation: illustrated by a
ses and numerous Practical Instruc-

tle presents us with a great deal of
ssessing both novelty and interest."
Brit. and For. Med. Rev.

le's treatise contains a most compre-
l complete description of the causes,
d treatment of club-foot."—Lancet.

KYLOSIS, or STIFF-JOINT:

Treatise on the Contractions and De-
sulting from Diseases of Joints. 8vo.
od Engravings, price 8s. 6d. cloth.

aking leave of Dr. Little's book, we
mend it to our readers; and we trust
ibute to awaken the attention of the
generally to a class of deformities,
were considered incurable."
Brit. and For. Med. Rev.

n, Brown, Green, and Longmans.

RKS BY GEORGE COMBE.

TEM of PHRENOLOGY.

dition. 4 Plates and above 70 Wood-
ls. 8vo. Pp. 1037. £1. 1s. boards.
has been translated into the French
n Languages.

IENTS of PHRENOLOGY.

, improved; with a New Chapter "On
ons between the Structure and the
of the Brain," and numerous Illustra-
10. Pp. 196. 3s. 6d. boards. This
een translated into French.

UNCTIONS of the CERE-

By Drs. Gall, Vimont, and
. Translated from the French. 8vo.
s. boards.

Simpkin, Marshall, and Co.; Long-
o.; and W. S. Orr and Co. Edin-
clachlan, Stewart, and Co.

EDINBURGH REVIEW, No. 170

is this day published.

CONTENTS:

1. Proposals for extending the Irish Poor-Law.
2. Speeches and Writings of the late Lord King.
3. Grote's History of Greece.
4. Lives of Eminent English Lawyers—Legal Education.
5. State and Prospects of British Agriculture.
6. Government of British India.
7. Railways at Home and Abroad.

London: Longman, Brown, and Co.
Edinburgh: A. and C. Black.

NEW WORK ON CLINICAL SURGERY.

Just published, in 8vo. 10s. 6d. cloth,

CLINICAL COLLECTIONS and OBSERVATIONS in SURGERY,

made during an Attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. Ormerod, Fellow of the Royal College of Surgeons of England; late House-Surgeon at St. Bartholomew's Hospital.

"We have been much interested by the perusal of Mr. Ormerod's collection of facts: we will not merely say that it is a work of great promise—it is more; it would do credit to any hospital-surgeon of thirty years' experience. We strongly recommend its perusal to our practical readers."
London Medical Gazette.

Longman, Brown, Green, and Longmans.

Just published, post 8vo. 7s. 6d. cloth,

THE MORAL ASPECTS of MEDICAL LIFE;

containing the "Akesios" of Professor Marx, &c. By James Mackness, M.D. Consulting Physician to the Hastings Dispensary.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. price 2s. 6d.

RECORDS of HARVEY: in Extracts from the Journals of the Royal Hospital of St. Bartholomew.

With Notes, by James Paget, Warden of the College, and Lecturer on Physiology in the Hospital.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. 5s. cloth,

A DESCRIPTIVE CATALOGUE of the ANATOMICAL MUSEUM of St. Bartholomew's Hospital.

Published by order of the Governors. Vol. 1,—Morbid Anatomy.

London: John Churchill, Princes Street, Soho.

Just published, 18mo. 3s. cloth,

A GUIDE for the PROPER TREATMENT of the TEETH,

with a view to their Preservation. Containing a popular Explanation of their Structure and Appendages, with Directions for the Management of them in Health, and Treatment in Disease; together with Observations on the best means of replacing them when lost. By W. K. Bridgman, Dentist.

London: John Churchill, Princes Street, Soho.

TO be Disposed of immediately, upon moderate terms, a MEDICAL PRACTICE in the West of England.—For particulars, apply personally or by letter, pre-paid, to Mr. William Archer, Porter's Lodge, Guy's Hospital.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

FOUNDED 1804.

Consulting Physician.—Dr. FARRE.
Physician.—Dr. F. J. FARRE.

Surgeons.—G. MACMURDO, Esq.
J. DALRYMPLE, Esq.; J. DIXON, Esq.
Assistant Surgeons.—G. CRITCHETT, Esq.
W. BOWMAN, Esq.

Upwards of Seven Thousand patients affected with Diseases of the Eye are under treatment every year at this Hospital; and those whose cases require operation, or who are suffering under severe Ophthalmia, are admitted into the wards. The large opportunity thus afforded of acquiring experience in the treatment of this important class of diseases will be found especially valuable to the more advanced pupil and the young practitioner.

Hours of Attendance daily from half-past 8 to 10.

Fee for one Year, FIVE GUINEAS.

No further fee is required for subsequent attendance on the practice, but the sanction of the Medical Officers.

Just published, in 8vo. price 8s.

THE PHILOSOPHY of LIFE, HEALTH, and DISEASE: New and Original Views explanatory of their Nature, Causes, and Connexion; and of the Treatment of Disease upon a few General Principles, based upon the Laws of Nature and Common Sense: the fruit of Thirty Years' Professional Experience. By CHARLES SEARLE, M.D. M.R.C.S.E.

John Churchill, Princes Street, Soho.

TONTINE LIFE ASSURANCE COMPANY, 20, Pall Mall.

CAPITAL, £400,000.

TRUSTEES.
John Elijah Blunt, Esq.
John Conolly, M.D.
Saville Craven Henry Ogle, Esq. M.P.

BANKERS.
Messrs. Herries, Farquhar, and Co.
Messrs. Martins, Stones, and Martins.

This Company effects every species of Life Assurance, Annuity, and Endowment.

Four-fifths of the profits divided amongst the assured on the participating scale.

This Company grants Tontine Annuities in classes according to age, with benefit to survivorship, viz.—

		£.	s.	d.
Class 5,	including 20 to 25 years of age,	3	11	5
Class 9,	.... 40 to 45	3	18	0
Class 13,	.... 60 and upwards	4	15	1

Example—A party investing £100 in Class 13 will, from the day of investment, receive an annuity of £4. 15s. 1d. per annum; and on the completion of the number in his Class, his annuity will increase as his companions die off, until it reaches the sum of £1,000 per annum, which he will enjoy during the remainder of his life.

Prospectuses may be had on application at the office.

FERDINAND GRUT,
Actuary and Secretary.

Medical Referees and Agents required in the Cities and Towns of England, Scotland, and Ireland.

A Premium will be given to Assurers and Shareholders in this Company.

Just published, 8vo. price 10s. 6d. cloth,

THE NATURE and TREATMENT of GOUT. By W. H. ROBERTSON, M.D.

"We have read this treatise with much interest, and we are sure that every one that opens the volume will allow that it is not only replete with information brought down to the latest period, and of a very practical character, but that it is conveyed in an agreeable and interesting manner. It is difficult to specify any one part of the volume as more deserving attention than another, for all are ably done."
EDIN. MED. AND SURG. JOURN.

London: John Churchill, Princes Street, Soho.

Just published, post 8vo. price 6s. cloth,

THE BRAIN and its PHYSIOLOGY; a Critical Disquisition on the Methods of determining the Relations subsisting between the Structure and Functions of the Encephalon. By DANIEL NOBLE, Member of the Royal College of Surgeons of England.

London: John Churchill, Princes Street, Soho.

DR. REES ON URINARY DISEASES, &c.

Just published, 8vo. with Plate, 7s. 6d. cloth,

ON the ANALYSIS of the BLOOD and URINE, in Health and Disease; and on the TREATMENT of URINARY DISEASES. By G. OWEN REES, M.D. F.R.S. Fellow of the Royal College of Physicians, Principal Medical Officer to Pentonville Prison, and Assistant-Physician to Guy's Hospital. 2d Edit. enlarged.

"A valuable text-book to the student of chemical pathology, whether beginning or advanced."
EDIN. MED. AND SURG. JOURN.

"We know of no better manual on the chemical analysis of the blood and urine to place in the hands of those who are joining themselves to the newly-formed schools of practical chemistry in this metropolis."—LONDON MEDICAL GAZETTE.

Longman, Brown, Green, and Longmans.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Oct. 16, 1846.

N° 986.—Vol. XXXVIII.
[New Series, No. 78.]

Price {Unstamped, 8d.
Stamped.... 9d.

LONDON MEDICAL GAZETTE,

OR

Journal of Practical Medicine.

Published every Friday Morning.

October 23, 1846.

Also in Monthly Parts.

LECTURES.

Page
Clinical Lecture upon the Treatment of Cancer of the Breast, delivered at the Westminster Hospital. By Benjamin Phillips, F.R.S. 691
Further Researches on the Composition of the Blood in the condition of Health and of Disease. By MM. A. Becquerel and A. Rodier. Part III. 696
 Analysis of the Blood in Affections of the Spinal Cord 696
 In Bright's Disease 696
 In Pregnancy and after Delivery 697
 In Anæmia, idiopathic and symptomatic 697
 General Conclusions 697

ORIGINAL COMMUNICATIONS.

A Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery, as bearing upon the Treatment of Cardiac and Pulmonary Diseases. By Norman Chevers, M.D. With Engravings. Part V. 699
 Congenital Narrowing of the Pulmonary Orifice 699
On the Nature and Principles of Treatment of Inflammation, and the allied Disorders of the Circulation. By George Robinson, M.D. Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-upon-Tyne Medical School. Part VI. 704
Cases treated at the Westminster Hospital. Reported by Mr. F. Wildbore, M.R.C.S.L. House-Surgeon. Part II. 708
 Cases of Injury to Bones or Joints 708

LEADING ARTICLES.

The Objections of the Society of Apothecaries to the Medical Registration Bill 716

REVIEWS.

Elements of the Theory and Practice of Medicine: designed for the use of Students and Junior Practitioners. By George Gregory, M.D. &c. 6th Edition 713
Records of Harvey, in Extracts from the Journal of the Royal Hospital of St. Bartholomew: with Notes. By James Paget, Warden of the Collegiate Establishment, and Lecturer on Physiology in the Hospital 718
Page
Elements of Physics. By C. F. Peschel, Principal of the Royal Military College at Dresden. Translated from the German, with Notes, by E. West 718

PROCEEDINGS OF SOCIETIES.

Medical Society of London.—Discussion on Mr. Pilcher's Case of Diabetes 719
South London Medical Society.—Mr. Robinson on a Case of Diseased Liver 720

HOSPITAL AND INFIRMARY REPORTS.

King's College Hospital.—Case of Pleuro-pneumonia treated without Venesection. Reported by Henry Smith, Esq. M.R.C.S. House-Surgeon 722

CORRESPONDENCE.

A Substitute for Poultices and Fomentation Cloths 723

MEDICAL INTELLIGENCE.

Atropine a Substitute for Extract of Belladonna 713
Gun-Cotton—Xylodine 724
Interment in Towns, and Desecration of the Dead 726
The Fever in and near Nottingham 727
Leprosy in China 727
Alleged Poisoning by the Vapour of Phosphorus 727
Treatment of Acute Mania 728
Antidotal Treatment of Lead Colic 728
Medical Court-Martial 728
Remedy for Toothache 728
Employment of the Tannate of Iron (Ink) in the Treatment of Chlorosis 728
French Medical Students 729
Sickness at Algiers 729
Gases in Sea Water 729
A Compromise with Homœopathy 729
Harveian Medical Society 729
The German Hospital 799
Obituary 729
Life of Harvey 730

MEDICAL STATISTICS.

Statistics of the Venereal Disease. By W. Acton, Esq. 731

SELECTIONS FROM JOURNALS, ETC.

Sciatica 733
Dislocation of the Ulna 707
Wound of the Bladder—Recovery. By Dr. Bresciani de Borsa, of Verona 709
Adhesions of the Eyelids to the Globe of the Eye 721
Treatment of Tympanitis by Puncture 721

WEEKLY TABLES, ETC.

[For Advertisements, see next page.

ANATOMICAL PLATES.

Now ready, in 2 vols. royal folio, half-bound morocco, gilt tops, £12 plain; £20 coloured,

A SERIES of ANATOMICAL PLATES in LITHOGRAPHY, with References and Comments. Edited by JONES QUAIN, M.D. and ERASMUS WILSON, F.R.S. Lecturer on Anatomy and Physiology at the Middlesex Hospital.

The Work may also be had as follows:—

THE MUSCLES. 51 Plates. £2. 16s. plain; £5. 5s. full coloured.
THE VESSELS. 50 Plates. £2. 14s. plain; £3. 18s. with the Vessels coloured.
THE NERVES. 38 Plates. £2. 4s. plain; £4. 2s. full coloured.
THE VISCERA, including the Organs of Digestion, Respiration, &c. 32 Plates. £1. 18s. plain; £3. 10s. coloured.
THE BONES and LIGAMENTS. 30 Plates. £2 plain; £2. 15s. coloured.

*** The Work may also be had in 106 Numbers. A List of the Plates, shewing the contents of each number, may be had gratis on application to the Publishers. Any number may be purchased separately.

Printed for Taylor and Walton, 28, Upper Gower Street.

Third Edition, almost wholly re-written,

LIEBIG'S ANIMAL CHEMISTRY. Part 1 (the first half of the Work), 8vo. 6s. 6d. is now ready.

Taylor and Walton, 28, Upper Gower Street.

DUBLIN EXAMINER in ANATOMY, MEDICINE, SURGERY, &c. This Work will be published in Monthly Parts, containing not less than thirty-two pages 8vo. in each. The First Part to appear on the 24th of October next. Price of each Part, 1s.

This day is published, post 8vo. price 9s.

LECTURES and OBSERVATIONS on CLINICAL SURGERY. By ANDREW ELLIS, F.R.C.S.I. Professor of Surgery in the School of the Apothecaries' Hall, Cecilia Street, and Surgeon to Jervis-street Hospital.

Dublin: Fannin and Co. London: Longman and Co.; and H. Renshaw. Edinburgh: Maclachlan and Stewart.

TESTIMONIAL to EDWARD COCK, Esq. F.R.C.S. Assistant-Surgeon to Guy's Hospital.—At a Meeting held on Friday, the 9th of October, 1846, it was resolved unanimously:—

1. That this meeting, deeply impressed with the zeal, ability, and courtesy, uniformly displayed by Mr. Edward Cock, as a Teacher of Anatomy at Guy's Hospital, for a period of more than twenty years, desire upon his retirement from the Anatomical chair, to record their sense of gratitude and esteem, by presenting him with a suitable testimonial.

2. That a Committee be formed to carry out the above object.

3. That no subscription shall exceed One Guinea.

Honorary Secretaries, to whom all communications may be addressed,

JOHN BIRKETT, Esq. F.R.C.S.
2, Broad Street Buildings.
EDWARD BENTLEY, M.D.
35, Trinity Square, Southwark.

*** For the convenience of gentlemen resident in the Country it is notified that a Post Office Order may be made payable to either of the Honorary Secretaries, or the amount remitted to the Bankers.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."

PHARM. JOURNAL, May 1846.

Prepared by Dinneford and Karland, 172, Bond Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

TONTINE LIFE ASSURANCE COMPANY, 20, Pall Mall.
CAPITAL, £400,000.
TRUSTEES.
John Elijah Blunt, Esq.
John Conolly, M.D.
Saville Craven Henry Ogle, Esq. M.P.
BANKERS.
Messrs. Herries, Farquhar, and Co.
Messrs. Martins, Stones, and Martins.

This Company effects every species of Life Assurance, Annuity, and Endowment.

Four-fifths of the profits divided amongst the assured on the participating scale.

This Company grants Tontine Annuities in classes according to age, with benefit to survivorship, viz.—

£. s. d.
Class 5, including 20 to 25 years of age, 3 11 5
Class 9, ... 40 to 45 .... 3 18 0
Class 13, ... 60 and upwards 4 15 1

Example—A party investing £100 in Class 13 will, from the day of investment, receive an annuity of £4. 15s. 1d. per annum; and on the completion of the number in his Class, his annuity will increase as his companions die off, until it reaches the sum of £1,000 per annum, which he will enjoy during the remainder of his life.

Prospectuses may be had on application at the office.

FERDINAND GRUT,
Actuary and Secretary.

Medical Referees and Agents required in the Cities and Towns of England, Scotland, and Ireland.

A Premium will be given to Assurers and Shareholders in this Company.

REFORM YOUR TAILORS' BILLS.

DOUDNEY AND SON, 49, LOMBARD STREET.

ESTABLISHED 1784.

Lectures.

INICAL LECTURE UPON THE

[MENT OF CANCER OF THE BREAST.

red at the Westminster Hospital,

By B. Phillips, F.R.S.

ject which I always endeavour to
sh on these occasions is, to explain
far as I can, the seeming and the
oulties which you meet with while
g a knowledge of your profession.
g the out-patients you frequently
en who seek our advice when suf-
om cancerous tumors of the breast,
have observed too our indisposition
lle with them; and you no doubt
ifficult to reconcile the cautious con-
ich we pur ue, with the bold state-
which you may find in respectable
as to the curability of these diseases.
e the present subject, not because
ase destroys life to any thing like
nt of many others, although death
mmon termination, but because the
principles of treatment are so un-

s are some persons who believe that
ny circumstances the disease is prac-
ncurable, and that the exertions of
ndant are to be confined to relieving
g; there are others, of equal name,
elieve that cancer may be cured with
out surgical operation. As it is
oth cannot be right, I must try to
m the course of conduct you ought
ue when called to treat such cases.
y of the older cultivators of medi-
ted upon the rule, that where the
was of long standing, large, covered
tuous veins, adherent to adjoining
occasionally the seat of lancinating or
g pains, the neighbouring glands en-
and the skin puckered, that no sur-
peration should be performed upon it.
lid not doubt that such a tumor could
hen be completely removed, but they
onvinced that the disease would be
uced, either at the same point or some
and they doubted whether the opera-
ither mitigated subsequent suffering
ended life. They believed that the
pervaded the whole system, and that
ration only removed the disease from
e point. Still, it is true that from
o time cases were mentioned where
le of treatment *so clearly laid down*
successfully violated; but these cases were either not credited, or only regarded as happy exceptions to a rule which was still believed to be of universal application.

Although the rule thus laid down has generally governed practice up to the present moment, there have not been wanting able men who have been convinced that the rule of practice to which I have already alluded was too stringently applied.

The first great shock which the rule sustained was given it by the experience of Störck, on the virtues of Hemlock; the next, by the publication of the experience of Rönnow, Justamond, and others, on the treatment of the disease by Arsenic; next by that of Hill, of his treatment by Excision; and that of Young and Recamier, by Compression.

Let us see how far each of these plans of treatment appears to have succeeded, and whether there be reason to think that cancer is occasionally a curable disease. Passing over Störck's experience, which would seem to show that he cured a great many cases by means of hemlock, we may come down to that of Alibert, who says he tried the remedy proposed in the manner directed by Störck, in 100 cases of cancer, without any advantage whatever. In Recamier's experience the effects derived from the use of hemlock were very much opposed to those of Alibert, but I am by no means satisfied that any of his cases of alleged cure should be regarded as proofs that hemlock exercises any curative influence over cancer.

The opposite results obtained in the different experiments are, however, easily explained, because Recamier, like Störck, in the course of his experiments subjected his patients to a very rigid diet, and the effects of the remedy were often then very remarkable. Alibert paid little or no attention to the diet of his patients, and the effects presented nothing remarkable. The course followed by Recamier was to commence with two doses of the remedy daily, one given two hours before the first meal, another two hours before the last, beginning with half a grain of the extract, and increasing it to six grains each time. This dose was continued for a fortnight, "to accustom the organs to it:" the dose was then carried to twelve grains, and so continued for two or three weeks according to circumstances. After each dose, as well as at meals, the patient drank decoction of China root. Only a third part of the usual quantity of food was allowed. When the full sedative effect of the medicine was obtained the dose was gradually lessened, and the quantity of food gradually increased.

On the whole, however, and after a careful consideration of all the cases within my reach, I am not satisfied that we have any proof that a cancerous tumor can be resolved by means of hemlock.

With respect to arsenic I am not satisfied that any of the cases recorded, as submitted to the internal and external use of this medicine, were really cured. I put aside those of Guy, Plunkett, &c. and shall refer only to those described by respectable men. How Mr. Samuel Cooper and Dr. Walshe can have so read Justamond as to conceive that he regarded it as a specific, I cannot tell. His own statement is as follows:—"I never succeeded in healing any ulcerated cancer, besides the first here described, by these methods (the use of arsenic), nor others which shall be hereafter mentioned. Though my first hopes were now cruelly frustrated in many instances, yet I could not but be convinced from the result of all my cases that something more had been effected by these methods than had been done by others." He then tried arsenic internally, and observed—"these were the only two cases in which I gave it a fair trial, and the hopes I entertained of its efficacy were disappointed."

Lefebure talks so loosely of his many cases, that I cannot follow him, and Rönnow gives us no evidence upon which we can rely, to show that he had cured any cases of cancer of the breast by the use of Arsenic. I must therefore leave to others to determine the value of his statement. He says: "In 30 years I have seen more than 20 persons cured of cancer of the breast, and of other parts, by the use of arsenic. I may therefore say that arsenic is as perfect a specific against the virus cancrosum or true cancer as mercury against the virus syphiliticum."

Of Arsenic, I say, that I am not satisfied that I have found on record any conclusive case in favour of the alleged *curative* influence of arsenic over cancer of the breast, but I am inclined to think that as a caustic agent it has brought about the cicatrisation of superficial cancerous ulcers.

In 1805, Mr. Young published his "Inquiry into the Nature and Action of Cancer," but in that I find no allusion to compression; but in his "Minutes" he states that he employed it successfully in two cases in 1807, and since that time in many others.

His reasoning on the modus operandi is as follows: "If by diseased tumors the brain can be absorbed, the bones of the skull removed, or the testis in hernia congenita obliterated, to reverse the powers of absorption seemed feasible. If by diseased pressure healthy structure could thus be removed, why not imitate such pressure, and take advantage of such powers, by directing them to beneficial purposes, and destroy in turn morbidly formed parts or tumors, by the very means with which nature has furnished them for the destruction of natural structure."

The use of compression of cancerous tumors of the female breast was strongly recommended by Mr. Young, not as a specific, nor even as a palliative in all cases, "but as a plan which commonly relieved pain, diminished the bulk of the tumor, and, in some cases, caused its complete disappearance."

The use of this means was strongly pressed upon the governors of the Middlesex Hospital, by the late Mr. Samuel Whitbread, in 1815; they directed the necessary observations to be made, and a report to be drawn up by the medical committee, of which Mr. Charles Bell was the organ. It was reported that "eight cases of open cancer, and eight cases of the scirrhous kind, have been submitted to treatment by compression, some of them for several months, and others for a shorter period. That in some of the cases of open cancer, combined with considerable oedema, the pressure was useful in lessening the volume of the tumor, but that it had not even in a single instance any salutary influence upon the specific nature of the disease. It frequently gave so much pain that the patients could not after repeated trials endure it under any modification whatever, and often it appeared to hasten the fatal event. "That in the scirrhous tumors the disease advanced, rendering extirpation necessary in two instances; in six others the disease passed into ulceration, assuming the usual malignant appearances, and terminating in death.

"Your committee have, therefore, to lament that compression cannot be regarded as a remedy for cancer.

"Your committee, however, although they cannot lay claim to the discovery of a specific, have still the consolation to believe that they have in many cases succeeded in obtaining great alleviation of suffering; such alleviation as might perhaps induce some speculative minds, less disciplined by experience, to conclude that they had at length succeeded in discovering a cure for cancer."

Right or wrong, it was not to be expected that those who felt a strong confidence in the virtue of Compression should admit the conclusiveness of the report. It is fair to say, that even Mr. Young himself did not appear to regard mechanical pressure as a specific, but he did conceive that the treatment had not been discreetly carried out at the Middlesex Hospital. Let us therefore see what is the evidence adduced by Mr. Young in favour of the practice. Dr. Walshe seems to have derived his information of the results of Mr. Young's practice from a French author (M. Bayle), and if we accept that as a correct result of this treatment, it is, no doubt, extremely favourable. It is as follows: "The number of cases given by him is 19: in 17 the disease affected the breast, in two instances it affected the cheek and the lip. In 12 cases the disease was cured, in five it was benefitted." This result, supposing it to be correct, that s to say that the disease was cancer, and that so many cases were really cured, would clearly make out two things—that cancer was often curable, and that by compression.

On referring to Mr. Young's Minutes, Parts 1 and 2, I cannot confirm the correctness of Bayle's statement. I find only ive clearly alleged cures, I believe eight deaths, and in three cases there was improvement, one doubtful. Many of the ases are so involved that I am not sure my tatement is correct.

The practice of treating cancerous tumors by compression fell into desuetude in his country after the Report of the Hospital Committee, but it was revived by Recamier n France, and he has published the results f his practice in 2 volumes. He gives ome particulars of about 84 cases of tumor, ancerous, or other, of the female breast. Of these, 17 are alleged to have been cured.

Now, assuming that they were cured, were hey really cancer? I think some were, but think a majority were not; in nine intances of alleged cure the patients were not more than thirty years old.

However, taking the cases to be as described, before and after the treatment by ompression, it is difficult to resist the conlusion that some of them were cases of ancer, and that they were cured. Whether in any so-called cases of cure the disease may have been subsequently reproduced we ave no means of ascertaining.

It is difficult to reconcile the Middlesex Hospital experience with that of Young and Recamier. In looking through the cases mentioned by those two gentlemen, we may oubt whether all the cases which are alleged o be cured were cancer, but it is hardly ossible to refuse to admit that several of hem appear to have had the ordinary chaacters of that disease. If that view of the ase be a correct one, the only way to escape from the difficulty is to assume that Mr. Young was right in his opinion, that at the Middlesex Hospital the remedy was not discreetly used. Under any view of the case, however, I annot satisfy myself that the statement of Bayle, cited by Dr. Walshe, is correct; namely, that of 127 recorded cases in which ompression was employed, in 71 the disease was cured, and in 26 it was ameliorated.

The method of applying pressure suggested by Dr. Arnott seems to me so ingenious, that the opportunity *is now afforded* or testing *the value of mechanical compression* unequivocally. And for myself I shall avail myself of every opportunity which may be afforded me of testing its real value; and, even if its value as a curative agent be smaller than that which is arrogated for it by friends, it will be most important even if its power does not extend beyond the alleviatton of pain.

Of all plans of treatment, however, none has been so extensively employed as Excision, and upon no question are opinions more unsettled than on the value of this plan.

The rule that cancer was incurable by operation sustained its first great reverse by the publication of the work of Mr. Hill, of Dumfries, in 1772. He stated "that Dr. Alexander Monro proposed by way of problem the following question: 'Whether ought cancerous tumors to be extirpated, or ought the palliative method only to be followed when they cannot be resolved?' And to encourage others to communicate their observations on the subject the doctor gives his own opinion in these words: 'Of near sixty cancers which I have been present at the extirpation of, only four patients remained free of the disease for two years.'" "But," says Hill, "there is no reason why people should be so much alarmed at cancers in the lips, or other external parts, as to sit down in despair, thinking it needless to suffer so much pain, in order to procure a short respite in place of a radical cure. For experience has happily put it in my power to give them far better prospects. In the course of 30 years' practice I have extirpated from different parts of the body 88 genuine cancers, which were all ulcerated except four, and all the patients, except two, recovered of the operations. Of the first 45 cases only one proved unsuccessful; in three more the cancer broke out again in different parts, and in a fifth there were threatenings of some tumors, at a distance from the original disease. These tumors, however, did not appear till three years after the operation; and the woman was carried off by a fever before they had made any progress. All the rest of the forty continued well as long as they lived; or are so at this day: fifteen of them were alive in 1772." "Of the next 33, one lived only four months, and in five more the disease broke out afresh, after having been once healed. "The reason why there were so many unsuccessful cases was," says Mr. Hill, "because the extraordinary success I met with made cancerous patients resort to me from all corners of the country; several of whom, after delaying till there was little probability of a cure by extirpation or any other means, forced me to perform the operation contrary both to my judgment and inclination.

"Upon a survey made in 1764 with a view to publication, the number stood thus:—Total cured, of different ages, from eighty downwards, 63; of whom there were then living 39. In 28 of that number the operation had been performed more than two years before, and in 11 it had been done in the course of the last two years. So that upon the whole, after 30 years' practice, 39 of 63 patients were alive and sound. The remaining 25 which complete the 88 were cured since the year 1764. 22 of these had been cured at least two years, and some of them, it may be remarked, were 70, and one 90 years old."

It is fair to say with reference to Mr. Hill's cases, that, so far as I can make out, only five of them were cancer of the breast, and only two of these remained alive and apparently free from the disease at the time he wrote; but, nevertheless, he maintains its virtue generally.

Evidence similar in kind to Hill's, though less favourable, has been offered by Schmucker, Gräfe, Roux, Warren, Sir Astley Cooper, Sir B. Brodie, Lisfranc, and Flajani; and it would be impossible to say that in their collective experience many cases of cancer had not been successfully treated by operation.

Lisfranc says:—"I have practised surgery in hospitals 20 years. I have been much occupied with cancer; I have operated a great number of times. I have as far as possible observed the patients after their cure, and I believe relapses are not very common." It is only fair to say, that Pauly's estimate of the cases treated by Lisfranc exhibits a less favourable result.

The other side of the picture of the results of operation by modern surgeons in the cure of cancer is widely different.

Dr. A. Monro said:—"Of near sixty cancers which I have been present at the extirpation of, only four of the patients remained free of the disease at the end of two years." Scarpa said that he only knew three cases in which the operation had been successful, and that in a long life and an extensive practice Boyer believed that in four cases in a hundred relapses were not observed. Macfarlane never knew a case in which the disease did not reappear after operation. His experience extends through 118 cases, and in all the disease returned and proved fatal.

Now, how are these statements to be reconciled? Hill saves six out of seven; Warren one in three; Cooper one in four; Flajani and Lisfranc state a still more favourable result: while in Monro's cases, only one in fifteen seemed to escape; in Boyer's one in twenty-five; in Macfarlane's *none at all*; and Macfarlane's experience is *much confirmed* by Leroy.

The experience of all these men was considerable, and therefore we cannot urge that the smallness of the numbers of cases observed was the cause of the discrepancy. If we believe still that the disease is always incurable, we must therefore assume, either that the diagnosis in the successful cases was incorrect, or that the cases were not observed for a sufficient length of time after operation to make the results satisfactory, or that true cases of cancer may be cured by operation.

With reference to the first point, it is certain that all cases of tumor of the breast are not cancerous; it is equally certain that, at an early stage of its existence, there is no certain sign, in the absence of operation, and perhaps even then, by which an unerring opinion can be pronounced on the nature of the disease;—it may be malignant, it may be benign. It is true there are certain rules upon which some persons are content to act; they would maintain, for instance, that if a tumor was present in the breast of a woman of 25, that it was not cancer; but that is an unsafe rule to follow, for among others, no case was better marked than that of Ledran, but his patient was only 22. Then, again, the history—how far can that be relied on? Take the case of a non-malignant tumor. The history of the case may impress one man with a conviction that it is cancer; another, with an equally strong conviction that it is non-malignant. The latter opinion may be the correct one; but the case is in the hands of the person who regards the tumor as cancer: he decides for extirpation; it is practised, and at the end of ten years there is no appearance of reproduction of the disease. This case impresses the operator with the opinion, that there is a stage in the progress of a cancerous tumor in the female breast when the disease is curable; while others refuse to admit that any case of cancer is curable at all.

But it is said, that although the knowledge to be gained by simple inspection may be insufficient to enable us to decide upon the nature of the tumor, that the microscope enables us to pronounce positively. Let us see how this is. A tumor is excised; it looks like cancer; under the microscope it presents nucleate or caudate cells. Twenty years pass, and the patient continues free from relapse. Would that justify you in saying that the diagnosis was incorrect, and that the tumor was not cancer? But even if the microscopic appearances were uniform, and that the utmost reliance could be placed on them, you cannot examine a slice of it on the living body; and if it be undoubted cancer, must we never interfere with it, even at a period before the system shews any mark of contamination?

Again, I say, that, spite of all these discrepancies, there can be no reasonable doubt that cases of true cancer have been cured by operation, and that the cure has been sustained many years after; but it is no less certain that, in a very large proportion of cases in which an operation has been performed, the disease has reappeared. The pinching question then remains, are there any rules so well established as to enable us to recommend operation in a particular case, admitting that we have proof that cases of cancer submitted to operation have continued free from relapse many years after? The evidence of Sir B. Brodie confirms the admission of occasional curability, for he says, "I have the satisfaction of knowing several persons on whom I have performed the operation, who are now alive and well, and who otherwise would certainly have been dead long ago."

Can we, then, point out the circumstances which make the operation justifiable as a probable curative agent? Few men have observed these cases more dispassionately than Sir B. Brodie, and he has come to the conclusion that there are cases of cancer of the breast where excision of the morbid structure is a cure. He has done more; he has endeavoured to point out what are the cases in which operation will fail—what are the cases in which it may succeed.

Flajani thought that all that was necessary was to excise the tumor in the first month of its existence. I should think very few attract attention in the first month. Mayo, M'Farlane, and others, think that, no matter how favourable the circumstances, reproduction is almost certain. Sir B. Brodie lays down the following rules as opposed to the operation:—"Where there is a conversion of the mammary gland itself into a scirrhous tumor, where the skin is contaminated, there is no chance of the operation making an ultimate or permanent cure." Yet in two cases of cure by Young, and two or three by Recamier, this condition was said to be present.

Again, he says: if the skin be brawny, the pores seeming enlarged, operation appears to hasten rather than to retard the fatal result. This condition appears to have existed in two of Young's cured cases, and two of those of Recamier.

Again: "a scirrhous tumor of the breast not unfrequently causes a contraction of the lactiferous tubes which pass from the various parts of the breast to the nipple; and this contraction necessarily causes a drawing in or retraction of the nipple. The retraction of the nipple is to be regarded as an unfavourable symptom; and an operation ought not to be had recourse to until, by a careful examination, it has been ascertained that the skin does not appear to be otherwise than in a healthy state." Now in Mrs. H.'s case, mentioned *by Young, "the skin was attached, brown, and discoloured, and the nipple retracted;"* and yet the cure is said to have been complete; and I have met with two other such cases on record.

Again, he says: "In many cases of scirrhous tumor of the breast, the skin is drawn or tucked in over the tumor, so as to produce the appearance of a dimple in it. Where this dimple in the skin exists, you may be almost sure that there is a scirrhous tumor in the breast beneath it; and on examination you will feel it with the finger. I believe this dimple of the skin to form a very great objection to the operation, and that, under these circumstances, there is little or no chance of it leading to a permanent cure." Now in not less than three of the cases described as cured by Young and Recamier, this condition existed.

Upon the whole, then, I am of opinion that there is evidence, which we are bound to admit, favourable to the conclusion, that cases of cancer of the breast have yielded to Hemlock, to Arsenic, to Compression, and to Excision, and that the cure has been permanent; but I believe the cases are not many, and I am of opinion that, under each plan, the cases of success bear an extremely small proportion to the cases treated.

Believing as I do that the above is a fair representation of the state of the case with respect to the use of remedies—satisfied as I am of the occasional curability—I regret that, after the best consideration I can give the subject, I have been obliged to come to the conclusion, that there is no rule at present known, by means of which we can say that, in a particular case, a particular remedy will or will not succeed in effecting a cure.

There are many cases on record where the patient was in the prime of life, and apparently in good health, where the tumor was small and unattached either to the mammary gland or the skin, where neighbouring glands were uncontaminated, and where no great uneasiness was ever experienced, where excision was complete, and yet the disease has been rapidly reproduced. There are others where the tumor has occurred at a later period of life, where the general health is not good, where the tumor is painful, apparently identified with the mammary gland, the skin over it attached and puckered, the nipple retracted, and yet the disease has yielded to treatment. That some rule will ultimately be found to guide us in determining upon the propriety or impropriety of having recourse to operation, or of relying upon any other treatment, I cannot doubt, but at present it is undiscovered.

FURTHER RESEARCHES ON THE

COMPOSITION OF THE BLOOD IN THE CONDITION OF HEALTH AND OF DISEASE.

By MM. A. Becquerel and A. Rodier.*

[Concluded from p. 571.]

Analysis of the blood in affections of the spinal cord — in Bright's disease — in pregnancy and after delivery — in anæmia, idiopathic and symptomatic. General conclusions.

In diseases of the spinal cord.—It seldom happens that chronic affections of the spinal cord present conditions which demand a general abstraction of blood. The general results of the analyses of blood in nine cases of disease of the spinal cord collected by the authors are therefore of some value, although the cases were too few to allow of any general conclusions being drawn from the results of these analyses. Of the cases in question two were females, of the respective ages of 18 and 42: both were bled for some complication in the course of an affection of the vertebræ, which had caused deformity and an almost complete paralysis. The blood of each shewed a deficiency of solid constituents, and presented all the other characters found in the blood of anæmic persons. Another case was that of a man, aged 56, who had become paraplegic from an affection of the spinal cord, of rapid progress. In the space of from thirty to forty days the disease had run through all its stages, gained the upper extremities, and produced death from paralysis of the respiratory muscles. Nothing but simple congestion of the spinal cord was found after death; not a trace of softening or other organic lesion. The blood in this case was drawn five days before death. On analysis it presented a deficiency in solid constituents, though less marked than in the preceding cases†. Of five other individuals affected with chronic disease of the spinal cord, and presenting the ordinary symptoms of such disease, three were bled once, and two twice. Most of the patients were paraplegic, and kept constantly to bed; their constitutions were greatly exhausted. The analysis of their blood shewed a considerable diminution in the proportion of solid ingredients. The last case was that of a man aged 36, of a good constitution, who was bled twice, with the interval of a day, for two violent attacks of painful spasmodic contraction of the muscles of the lower extremities. A diminution in the quantity of solid ingredients in the blood of both these venesections was observed. From the results of the analyses of the twelve bleedings made on these nine patients, it would appear that when affections of the spinal cord are accompanied by paraplegia, there is usually a marked diminution in the quantity of blood-globules—a diminution which is the greater the more advanced the disease has become, and the more debilitated the patient is. In some of the above cases the quantity of blood-globules was even less than is found in many cases of chlorosis: nevertheless, there existed no bruit in the carotids. In the blood of the second bleedings the diminution was still greater, although the patients had continued to eat, shewing that the diminution was to be attributed to the effect of the disease rather than of diet. The quantity of fibrine was sometimes normal, at others, in consequence of a transient phlegmasia, it was above its healthy average, and sometimes it was still higher, without the existence of any phlegmasia or other known cause to account for it. The serum had generally a high density and contained almost always a considerable quantity of solid ingredients, of which albumen, extractive principles, and fatty matters, formed about their due relative proportions.

In Bright's disease.—It was shewn by Gregory and Christison in England, and by MM. Rayer and Martin Solon in France, that in this disease there is a modification of the serum of the blood, consisting of a diminution in density, and consequently of an impoverishment in respect of solid constituents. MM. Andral and Gavarret have more recently, by their analyses, confirmed these results, and have shewn, moreover, that there is a considerable diminution in the quantity of blood-globules, which they attribute to the anæmic condition of the system, coincident with or rather consequent on the structural change in the kidneys passing into a chronic state. In the present researches the blood of six bleedings only, of patients suffering from this disease, has been examined. One of these patients, a man aged 19, of robust frame, was attacked with considerable anasarca, consequent on Bright's disease. He had at the same time severe bronchitis, but without fever; he was bled once. The second case was that of a man aged 22, who was attacked with anasarca consequent on Bright's disease, and unattended with any complication. He was bled twice, with an interval of two days between each venesection. The third case was that of a man aged 39 of robust frame, and attacked with acute dropsy to a considerable extent, bronchitis, and considerable fever;

---

* Translated from the *Gazette Médicale de Paris.*

† The authors give the details of these analyses, but only the general results are translated.—Trans.

he was bled twice at the commencement of the attack, a day intervening between each venesection, and a third time about a month afterwards. When bled the third time the patient was much better, and his urine contained less albumen, yet the return of fever threatened a relapse. Following are the results of the analyses in these six bleedings.

Analysis of 1000 *parts of blood.*

	FIRST PATIENT.	SECOND PATIENT.		THIRD PATIENT.		
		1st bleeding.	2d bleeding.	1st bleeding.	2d bleeding.	3d bleeding.
Water	832·6	801·9	838·7	No analysis	811·4	807·3
Globules . . .	99·8	129	97·1	"	128·8	123·1
Solid constituents of serum . .	61·3	66·4	61·4	"	55·5	64·4
Fibrine	6·2	2·7	2·8	"	4·3	5·2
Density of serum .	1019	1023	1022	1023·5	1020·3	1023
Analysis of 1000 *parts of serum.*						
Water	931·5	926	932·1	926·6	935·9	926·1
Solid constituents of serum . .	68·5	74	67·9	73·4	64·1	73·9

These facts, although few in number, tend to shew, 1st, the generally small proportion of globules in the blood in this disease; 2d, that the quantity of fibrine is about normal, except where an inflammatory affection complicates the original disease, and then the quantity increases; 3d, the considerable diminution in the quantity of albumen, which is the more marked the more chronic is the form of the disease, and the more frequently the bleedings are repeated. These conclusions agree perfectly with those drawn from the analyses made by MM. Andral and Gavarrat in this disease.

In Pregnancy.—In their former researches the authors confirmed the two facts stated by MM. Andral and Gavarrat concerning the blood in pregnancy; namely, first, that there is a diminution in the proportion of blood globules; and secondly, a slight increase in the quantity of fibrine. In the present inquiries they have obtained another result, namely, that there is a diminution in the quantity of albumen contained in the serum, and consequently that the density of this fluid is somewhat below the normal standard. These different modifications of the blood are most marked towards the end of pregnancy, and this may, in the opinion of the authors, probably account for many of the symptoms peculiar to the puerperal state. The diminution in the quantity of albumen, for example, may in some measure explain certain forms of dropsy which are apt to occur towards the end of pregnancy, and may possibly also have some influence in the production of puerperal fever, and other maladies which sometimes follow delivery.

In Chlorosis. — The authors have examined the composition of the serum in cases of females attacked with simple chlorosis (or idiopathic anæmia), and have found a well-marked resemblance in the characters of each. The serum was very abundant, always limpid and transparent. Its density has been about natural. The analysis of 1000 grains shewed about a normal average quantity of solid ingredients: for example, in eight of the nine cases the proportions of solid constituents in 1000 parts were 89·2, 89, 88·8, 88·7, 87·8, 87·4, 87, 85; mean 87·9 [average in health, 90·3]. Nothing unusual was found in regard to the extractive and fatty principles and the salts. In short, no peculiar modification was found in the composition of the serum, the change in the blood consisting entirely of a diminution in the quantity of corpuscles. In those forms of anæmia, however, which are symptomatic, or consequent on other diseases, there is, together with a diminution in the quantity of globules, a diminution also in the quantity of albumen, and a consequently low specific gravity of the serum.

General conclusions. — The conclusions which may be drawn from the results of the present researches seem to resolve themselves into the following propositions:—

1. The various albuminous substances contained in the blood are possessed of a powerful affinity for water: whence results considerable difficulty in expelling all moisture from these substances during the operation of drying. It results also, that after these substances have been thoroughly deprived of water, they commence immediately on exposure to the atmosphere to absorb it

again, and as much difficulty is experienced in expelling this portion as in expelling that which at first formed a constituent of the substance. The presence of this water is apt to derange very considerably the results of calculations.

2. So soon as blood is drawn from a vein and left exposed to the atmosphere, it undergoes a constant evaporation of its aqueous partiles, the degree of which is in direct ratio to the amount of surface exposed, the degree of temperature and state of moisture of the atmosphere. This evaporation, by diminishing the quantity of water, and so concentrating the solid ingredients, gives rise to erroneous results in calculation. This source of error can only be avoided by keeping the blood in a vessel carefully closed.

3. The density of the serum of blood, when carefully determined, is in general, and on the average, in direct relation to the quantity of solid ingredients which this fluid holds in solution. This equilibrium may, however, be disturbed. Thus the density is greater when there is little albumen and much extractive matter, and free salts; and, on the other hand, is more feeble when there is an excess of albumen, and, what is more rare, an excess of fatty principles, and only a small quantity of extractive matters, and free salts.

4. The serum of the blood, whatever may be its composition, being mixed in different individuals with variable proportions of globules, it results that, in complete analyses of the blood, the numbers which represent the solid materials contained in the serum have not an absolute value. In order, therefore, to form a correct idea of the composition of the serum in health and in disease, it is necessary to examine this liquid separately, and to analyse it after spontaneous coagulation has isolated the globules and the fibrine.

5. When a tolerably large blood-letting is practised, and the stream is not very rapid, the different portions of the blood drawn have not exactly the same composition, the latter portions being more aqueous, and less rich in solid constituents, than the earlier ones. This impoverishment is probably quite progressive from the commencement to the cessation of the venesection.

6. Venesection exercises a very sensible influence on the composition of the serum, rendering it more aqueous, of a less specific gravity, and less rich in solid constituents. The quantity of blood drawn, and the repetition and number of the bleedings, necessarily influence this impoverishment, which they render more or less marked. Diet, and the progress of the disease, also add their influence, and contribute to diminish the proportion of solid parts. This impoverishment is principally at the expense of the albumen, whilst the amount of extractive matters, free salts, and fatty principles, varies but little.

7. The following about expresses the physiological characters of the serum in health:—1000 parts contain on the average 90 parts of solid ingredients. Of these 90 parts, albumen constitutes 80; extractive matters and free salts, 8; fatty principles, 2. The extreme numbers expressing the proportion of solid ingredients, are 86 for the lowest and 95 for the highest, or much more frequently 88 and 92. The mean density of this liquid may be represented by 1027·5, and its physiological limits by 1028·5 and 1026·5. The highest number is found in strong, robust, and well fed individuals. The lowest occurs in the opposite conditions. The influence of age, sex, and temperament, is not yet determined.

8. The density of serum, and the quantity of solid ingredients which the fluid contains, are within the physiological limits in plethora, in all slight affections or chronic diseases which exercise but little influence on the general state of the system, and in which food continues to be taken, in chlorosis, the commencement of pregnancy, the beginning of some acute affections, &c. In these different conditions, the numbers expressing the density and proportion of solid ingredients are in the lowest extremes of the healthy state.

9. The solid constituents of the serum, however, and especially the albumen, undergo a sensible diminution under the influence of many conditions, which act with different degrees of force. For example, this diminution is slight under the influence of diet, of repeated bleedings, slight phlegmasiæ, whilst it is more considerable in acute diseases, especially if they are prolonged, in severe phlegmasiæ, and especially in typhus, in symptomatic anæmia, the end of chronic affections, the end of the period of pregnancy, &c.; it is very great, lastly, in Bright's disease, in puerperal fever and convulsions, and certain affections of the heart, with dropsy.

10. Increase in the proportion of solid ingredients in the serum, and especially of albumen, is a rare circumstance; it occasionally occurs, though so uncertainly that nothing can be determined respecting it; it is observed, however, almost constantly in disease of the spinal cord.

11. Complete analysis of the blood, in a few cases of disease of the spinal cord, with hemiplegia, has shewn to exist—first, diminution, often considerable, of the number of globules, without there being produced any arterial bruit, which always exists in other cases of diminution in the proportion of globules; and, secondly, a sensible increase in the proportion of solid ingredients of the serum.

A COLLECTION OF FACTS ILLUSTRATIVE OF
THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF
CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

[Continued from p. 375[*].]

CONGENITAL NARROWING OF THE PULMONARY ORIFICE (*continued.*)

VII.—*The pulmonary orifice narrow—the ventricular septum imperfect—the foramen ovale and arterial duct closed.*

This species of malformation, like those which have been previously described, presents several remarkable varieties, the most interesting of which consists in an entire *absence* of the *arterial duct*, as observed in the following instances.

Professor Huss, of Stockholm, attended a boy 6 years of age, who had from birth exhibited the usual symptoms of cyanosis. When he entered the Hôpital des Séraphins the colour of his skin was dark blue, that of the mucous membrane of the mouth clear blue;—he had frequent attacks of palpitation and hæmoptysis, and at times convulsions. During several months that he continued in the hospital the hæmorrhage from the lungs became more and more frequent, and in one of these attacks he died. The heart was found about three times as large as the patient's fist. The enlargement was principally in the right ventricle, behind which was the left ventricle like an appendix. The *foramen ovale* was closed. At the upper part of the *inter-ventricular septum* there was a semilunar opening of nine lines extent. In the right ventricle the orifice of the *pulmonary artery* formed a circular opening two lines in diameter with a cartilaginous margin; two lines within this opening there existed two folds resembling semilunar valves. The sinus of

---

[*] The following remarkable instances of *contraction of the pulmonary ostium, associated with perforation of the auricular and ventricular septa*, were accidentally omitted when describing the several conditions of parts with which that malformation is found to be associated.

The first and second of these correspond with the cases observed by Sandifort, Knox, Lexis, and Otto, in which narrowing of the right ventriculo-pulmonary orifice was attended with complete absence of the arterial duct; and the first case is especially interesting when placed beside the example cited by the latter author. The absence of any trace of an arterial duct at a period of a few years after birth, may not be deemed positive evidence that such communication has never existed, but the fact of its entire absence in two fœtuses dissected by different observers, is sufficient proof that the existence of the duct, or of any analogous communication, is not absolutely essential for the continuance of intra-uterine life; providing the supply of blood to the lungs be limited by a narrow condition of the pulmonary artery, and by a free communication between the right and left cavities of the heart.

Nich. Steno observed, in an otherwise monstrous fœtus of the female sex, that the *pulmonary artery* was much narrower than the aorta. The latter vessel, which was situated to the right, arose from both ventricles, the *septum* being imperfect. The auricles were in the usual fœtal condition. There was *no ductus arteriosus*. (*Acta Hafniensia*, p. 1. p. 200, *as quoted by Hein, Tab. II.*)

The following history has been given by Drs. Aran and H. Bennet (Lancet, 1844, vol. i. p. 501):—A girl, ætat. 20, who had been the subject of cyanosis of a very aggravated kind, died in the Hôtel Dieu, death being apparently mainly the result of disease of the hip, and erysipelas consequent upon caries of one of the ribs. Her stature was small. She presented no signs of puberty, and her understanding was imperfectly developed. She had no cough, except when hurried, nor dyspnœa; the feet were often œdematous. The superficial venous system was much developed; voluminous veins of a deep ue colour crossed the skin in every direction, nd were united by a net-work of anastomosed veinulæ. Latterly, vertigo, and even loss of consciousness, frequently resulted from exertion. A short time previously to her death the cardiac impulsion was found to be smart and short, but considerably stronger and more extensive than natural: it was followed by a diastolic backstroke. Opposite the apex of heart, the two sounds were perceived, with an appearance of systolic murmur; but the first was a loud prolonged bellows murmur, with a very sensible purring tremor opposite the arterial orifices of the organ; and the second very short and loud. The bellows murmur was very sensible and superficial over the pulmonary artery, from its valves to the top of the sternum, along the left side of that bone. This murmur was limited superiorly by the clavicle, and on the sides by the right edge of the sternum, and by a perpendicular line proceeding from the external extremity of the left clavicle; no murmur in the vessels of the neck, nor upon the course of the aorta; pulse regular, 112, very small, and weak; resonance of the lungs normal, and the vesicular murmur pure in all the extent of the chest.

On dissection, the body was found to be generally œdematous; the heart was one-half larger than natural, right ventricle one-third more voluminous than the left. The walls of the right ventricle were half an inch in thickness; the *arterial orifice* was seated at the superior part of the ventricle, near the septum: it was contracted to the size of a goose-quill; its circumference was surrounded by cartilaginous patches, and almost obliterated by small yellowish and fibrinous vegetations, very little adherent to the edges of the orifice. The pulmonary valves were higher seated, an inch above the contraction, so that between the orifice of the ventricle and the pulmonary valves was a cavity, half an inch high, and one inch in width, covered by the lining membrane of the heart slightly thickened, and containing a polypous concretion; the pulmonary orifice was contracted to a quarter of an inch, and the arterial coats were thinner than natural. There was *no vestige of ductus arteriosus*. The *ventricular septum* was perforated at its upper part by a smooth and circular aperture half an inch in extent: aortic orifice and valves perfectly sound. Right auricle dilated, and slightly hypertrophied. The septum of the auri-

Valsalva formed a pouch eleven lines in diameter, filled with fibrinous clots, organised and adherent to the parietes, so that the canal was of the same diameter as its orifice; the length of the pouch was six lines. There was *no vestige of an arterial duct.**

M. Gintrac relates† the case of an infant who had exhibited in a very marked degree the symptoms of morbus cæruleus, and which died in the second week after birth. The cerebral vessels were found extremely gorged with blood; the lungs were also very highly congested, and did not crepitate firmly on pressure. The heart was very large, and shaped somewhat like that of a turtle. The right ventricle was highly muscular; from this cavity the aorta as well as the *pulmonary artery* was found to arise. The latter was, however, nearly closed up; and *no trace of ductus arteriosus* was visible. The left ventricle was atrophied, and exhibited no appearance of arterial aperture or of mitral valve. In the *septum cordis* was a large round aperture which permitted a very free communication between the two ventricles.

In the preceding section a case related by Drs. John Crampton and Todd was cited, in which the contracted pulmonary artery arose from a supernumerary muscular cavity which communicated with the right ventricle. The following is a somewhat similar instance.

Mr. G. Holmsted attended a girl, ætat. 9 years, who, up to the age of 3½ years, was quite healthy, but then began to be affected with shortness of breath, lividity of the surface, and extreme chilliness. She continued in this state till about three months previous to her death, when, in consequence of a severe fright, she went into a kind of fit, which lasted about two hours. After this she became subject to occasional attacks of the kind, which came on with pain in the head and giddiness, a pallor of the face, with extreme difficulty of breathing, and increased palpitation. She died rather suddenly in an attack attended with pain in the head, and the evidences of thoracic obstruction. The heart was more than naturally large and muscular. The right auricle was found much distended, containing four or five ounces of blood. The *foramen ovale* was perfectly closed. The aorta was placed over the *septum of the ventricles*, and about the centre of the right ventricle there was a small opening into a corresponding cavity in the muscular structure of the heart, and from the upper part of this cavity the *pulmonary artery* went off. The left cavities were comparatively small. The *ductus arteriosus* was closed. The lungs were of a dark colour; the vessels of the head were a little fuller than usual.*

Except in the closed state of the foramen ovale, the condition of parts in the above case did not materially differ from that observed in Dr. Crampton's patient: it is, however, evident from the figure which accompanies Mr. Holmsted's narrative, that here the point of obstruction was formed at the narrow opening which led from the right ventricle to the supernumerary muscular cavity, and not at the entrance of the pulmonary artery, as was the case in Dr. Crampton's instance. The position, in Mr. Holmsted's case, of the supernumerary cavity at a considerable distance below the spot at which the pulmonary artery usually arises, must also be regarded as a proof that this additional ventricle was not formed by a mere dilatation of the infundibular portion of the right ventricle in consequence of an obstruction at the pulmonary orifice.

The following cases present several remarkable varieties of this kind of malformation.

Mr. J. Marshall gives the following account† of a man who had been cyanosed from birth, and had always suffered from symptoms of suffocation upon the slightest exertion:—The surface was cold; the pulse

---

cles was perforated by a valvular slit. Great consolidation of the lungs by tubercles, of which a great many were softened; there were two little caverns at the summit of the left lung. Large tubercular masses were also found in the spleen.

The case alluded to at p. 371, where a diagram is given of the peculiar valvular apparatus with which the pulmonary artery was furnished (fig. *g*), was that of a young lady, a patient of Dr. Iliff's, who died at the age of 12 years, with the usual symptoms of malformation of the heart, which had appeared during her infancy, and gradually increased. The state of the heart, discovered after death, has been described by my friend, Mr. W. T. Iliff, jun. (MED. GAZ. vol. xxxvi. p. 1376). The organ was rather large, the right auricle strong and large, the *foramen ovale* open so as to admit a goose-quill, but valvular on the right side; the ventricles were about equal, communicating at their base by an opening in the *septum* sufficient to admit the little finger; *pulmonary artery* small and thin, with a conical valve truncated above to form an opening, which, being thickly beset with vegetations, would scarcely admit a crow-quill. The cord of the *ductus arteriosus* was complete. There were also vegetations on the aortic and mitral valves. The heart is preserved in the museum at Guy's Hospital (Preparation 1379^{75}). I observe that portions of the inner surfaces of the tricuspid valve are also coated with adherent clots. The left auricle and ventricle are of small capacity. An inspection of the preparation, or of the diagram which I have given, will at once shew that the peculiar form of the funnel-shaped valve, and the arrangement around its opening of a little tuft of elastic vegetations which close together over the aperture, must have completely prevented even the slightest reflux of blood into the ventricle during the diastole of that cavity.

* Gazette Méd. de Paris, Feb. 11th, 1843.

† Archives Générales, as quoted in Med. Chir. *Review, Jan* '*1839.*

* London Medical Repository, vol. xvii. p. 456.

† MEDICAL GAZETTE, vol. vi. p. 886.

all and frequent, but regular. A few nths before his death, he became drop- al, his breathing grew extremely oppressed, d he was incapable of lying down. Four llons and a half of effusion were removed m the abdomen, with considerable tem- rary relief; but re-accumulation of the iid occurred, and the patient died, at the e of 23 years. The abdomen was found contain five gallons of fluid. The right ricle of the heart was large; the *foramen ale* perfectly closed. In the *ventricular ptum* there existed an aperture about an ch in diameter. The semilunar valves of e *pulmonary artery* were shrivelled, and peared useless, but were not ossified. out an inch above the valves the artery s contracted so as to form a stricture, rdened by ossific deposit, and about the meter of a goose-quill. The coats of the tery above the stricture were very thin, d formed a sort of sac. The ventricles re of equal strength. The pulmonary ins and left auricle were very much di- inished in size; the left ventricle also was all. The aorta arose naturally, and its lves were healthy. The lungs were small d black from the blood they contained, t were not diseased.*

The following case is interesting, from the re with which the physical signs were served:—

Dr. C. F. Gravina relates† the case of boy, ætat. 9 years, who had been cyanosed om his birth, and suffered from a violent d continual palpitation of heart, and ort rapid respiration. On the least exer- n these symptoms were severely aggra- ted. The respiration was heard distinctly l over the chest; but in the precordial gion two abnormal cardiac sounds were cognised: one of them resembled the rring of a cat, and was heard during the stole of the heart; the other, which ap- ared to accompany the contraction of the ricles, was so clear and sonorous that was heard over the whole of the right de of the chest; over the left side, how- er, it was scarcely heard. While the boy as in a state of repose his pulse beat from 8 to 84 in the minute; but, on the least citement, rose to 100 or 105. He died ddenly, in consequence of an attack of nvulsions and dyspnœa. The lungs were und of a violet colour, regular in their rm, and crepitating on pressure. The ght ventricle was nearly twice as large as e left; but its walls were of the ordinary thickness. The left ventricle was smaller than common. The *ventricular septum* was deficient below the point where the aorta arose, leaving a circular communication between the two ventricles. This opening was largest on that side which corresponded with the right ventricle, but was somewhat contracted on that of the left. The aortic orifice was much dilated, as were also the semilunar valves, which appeared proportioned to the increased dimensions of the vessel. The *pulmonary artery* was very much contracted, but its walls were unaltered. The *foramen ovale* was closed.

Dr. Pulteney attended a young gentleman who could not walk across the room without turning almost black in the face and hands, and becoming faint and almost breathless. He sunk under an attack of dysentery, at the age of 13 years and 9 months. The lungs were found to be remarkably small and collapsed, and some parts of them were so flaccid as to suggest the idea of their having been incapable of performing their functions. The heart was of the natural size. The orifice of the *pulmonary artery* was much smaller and more firm than is usual, but there was no fault in its valves. The ventricles communicated by a deficiency in the upper part of the *septum* capable of admitting the end of a finger. The ventricles and right auricle appear to have been of ordinary size; but the left auricle was very small.*

In this case the imperfect state of the ventricular septum appears to have been due to mere rigidity of the structures at the base of the pulmonary artery, without any imperfection in the vessel itself. It might be judged from this, and one or two other examples in which the pulmonary ostium was not found extremely contracted, that the closure of the foramen ovale has been due to the comparatively slight amount of obstruction existing in the vessel. In several cases, however, extreme contraction of the artery has been found in conjunction with an impervious state of the auricular septum. The following instance may be taken as a fair example of this condition. It is certainly possible that the narrowness of the orifice may have been gradually increasing up to the time of the individual's death; but the history of the symptoms renders it probable that the vessel had been greatly obstructed from the earliest period:—

The second case recorded by Dr. Pulteney† is that of a lad whose complexion had always been dark, or inclining to black; he was liable to fits, upon the accession of which he suffered from oppression at his heart, became weak or faint, grew dusky in his colour, and at last almost black, fell down, and seemed insensible. He commonly soon came out of the fit with sobbing and yawning, and a sense of fatigue. He could escape the fit by instantly lying down on the carpet on his left side, and remaining immoveably fixed in that posture for about ten minutes. He died at the age of 13 years. The orifice of the *pulmonary artery* was so small that it could barely give passage to a small probe. The *ventricular septum* was perforated so as to allow the thumb to pass. No other cardiac lesion is mentioned either in this or in the preceding case; and, as the instances were recorded at a time when patency of the foramen ovale was regarded as one of the most frequent causes of the blue disease, it is quite improbable that Dr. Pulteney could have overlooked such a deficiency had it existed.

---

* I have alluded to this case at the commence- ent of this paper, and given a copy of Mr. arshall's sketch of malformed artery (fig. e, 370.)

† Schmidt's Jahrbucher, *July 1839, and Edin- rgh Medical and Surgical Journal, vol. xxxv.*

* Medical Transactions of the College of Physicians, vol. iii. p. 334.

† Op. citat, vol. vi. p. 299.

Besides the specimen presented by Dr. Iliff, and already referred to, there are two very interesting examples of this kind of malformation in the collection at Guy's Hospital.

The preparation marked 1379^{50} is taken from a lad, æt. 16, who was of rather robust appearance, and who had since his birth been much troubled with palpitation of the heart and great dyspnœa upon the slightest exertion. He had also suffered from frequent attacks of pain in the left side. He entered the hospital on account of an indolent ulcer on the leg, depending on feeble circulation. Both lower extremities were rather œdematous. There was usually lividity of the lips, but it was only on increased exertion that his face became decidedly blue. The pulse was regular, but slow and feeble. He was subsequently attacked with fever, and died after profuse hæmoptysis, from which he had never before suffered. A small quantity of bloody serum was found in the cavity of the right pleura; the substance of the lung was rather œdematous, and contained miliary tubercles. The left lung was enormously engorged with blood, friable, and containing, at its apex, a tubercular excavation, apparently of old standing. The bronchial mucous membrane was highly vascular; the pericardium contained about ℥iij. of sanguinolent serum.[*] The *pulmonary artery* at its commencement was about half its usual size.[†] The right auricle was enormously dilated, the tricuspid orifice was wide, and its valve doubtless admitted of free regurgitation. The right ventricle was exceedingly large, and bore traces of hypertrophy. The aorta arose from the right ventricle, posteriorly to the pulmonary artery. The *ventricular septum* was deficient above, leaving a communication an inch in diameter between the ventricles. The left cavities were small, and their parietes were much attenuated. The aorta was very large, and its valves were somewhat thickened. The *foramen ovale* was closed. There was a considerable deposit of fat upon the surface of the heart.

The specimen numbered 1382^{22} is a heart, which appears to have belonged to a person 15 or 16 years of age, the pulmonary orifice would barely admit a common pencil; the upper portion of the artery is of fair size. The aorta arises above an aperture in the *ventricular septum*, and communicates rather more freely with the right than with the left ventricle. The walls of the left ventricle are thinner than those of the right; the right ventricle is much stronger and more capacious than the left. The right auricle is dilated, the left much contracted. The *foramen ovale* is closed. The preparation does not present any trace of an *arterial duct*, and, as the aorta becomes suddenly smaller at the spot where the arterial ligament is usually attached, there has not improbably existed some irregular communication between one of the vessels of its arch and the pulmonary artery. The aortic, mitral, and tricuspid valves, present numerous vegetations. The upper intercostal branches of the aorta are rather larger than natural.

Several other examples of this species of malformation have been recorded. Of these the following are the principal.

Mr. Abernethy[*] mentions the case of a child, ætat. 2 years, who died with symptoms which indicated an impediment to the transmission of the blood through the lungs. The aorta arose from the right ventricle, which was of unusual size and thickness. The orifice of the *pulmonary artery* was small, and the remainder of the vessel one-third less than its usual size. The *ventricular septum* was imperfect. The left cavities were considerably smaller than the right.

In the heart of a cyanosed boy, ætat. 6 years, M. Olivry[†] found contraction of the *pulmonary artery* associated with an imperfect state of the *ventricular septum*. The *foramen ovale* and *arterial duct* were closed. A similar condition of parts was observed by Meyer[‡], in a girl who died in her 7th year.

Dr. Farre describes[§] a heart (preserved in Sir A. Cooper's collection), which was taken from a boy in whom, at the time of birth, nothing unusual was observed; but after a few months cyanosis began to appear, which was heightened by passions of the mind, and by cold. Before he was three years old he had lost the use of his lower extremities; but this paralysis subsided in a few weeks under medical treatment. At the earliest period at which he was able to express his feelings, he complained of frequent nausea and severe headache. These symptoms were brought on or increased by the causes above mentioned, and were established at the age of five years. At the age of nine years and five months he was found to have lost the use of his left thumb; and, in two days afterwards, there was paralysis of the arm and leg on the same side, with partial convulsions of short duration. He expired in a few days, with the symptoms of an acute head affection. Upon dissection, an abscess was found in the right hemisphere of the brain, containing about an ounce and a half of a thick, dark-coloured, and extremely unhealthy pus. The ventricles of the heart communicated at the root of the aorta. The semilunar valves of the *pulmonary artery* were contracted into a small circle. The *arterial duct* was closed. The state of the auricular septum is not mentioned, but patency of the *foramen ovale* could scarcely have been overlooked.

---

[*] Report by Mr. Dade, MED. GAZETTE, vol. xi. *p. 159.*

[†] *In the preparation* it scarcely appears to be *capable of* admitting a slender little finger.

[*] Surgical and Physiological Essays; Part Second.

[†] Quoted by M. Gintrac. op. cit. p. 177.

[‡] Meckel, Archiv. B. i. H. 2, Tab. ii, 42, p. [illegible]

[§] Op. cit. p. 24.

Dr. Watson[*] makes slight allusion to the case of a lad, æt. 17, in whom the pulmonary orifice would not admit a goose-quill, the *ventricular septum* being imperfect.

A similar instance of malformation in a girl 21 years of age, is recorded by Professor Dunglison, in the Philadelphia Medical Examiner for May 1845. Of this patient's early history nothing was known; but during the last year of her life she was unable o perform any work, or take exercise of any kind, as upon the least exertion or excitement she was attacked with palpitation and dyspnœa, accompanied with some blueness of the skin,—all of which gradually disappeared on her remaining at perfect rest. She was also subject to attacks of the same kind fter dinner: these paroxysms during the atter part of her life came on every day, ontinuing for two or three hours, even hough she remained perfectly quiet, being pparently excited by the mere stimulus of ood. She had also a constant and strong asping bruit, accompanying the first sound of the heart, and masking it partially. She uffered much from headache, which, a few ays before her death, became greatly inreased, accompanied with high febrile exitement, followed by delirium, coma, and eath. At the time of her death the patient was menstruating profusely. On examination, the *septum ventriculorum* was found deficient at the orifice of the aorta, giving that vessel an origin from both ventricles; the *pulmonary artery* was contracted, so as barely to admit the little finger; both lungs were studded throughout with crude and miliary tubercles, none of which were softened; the left lateral ventricle of the brain was filled with pus, the lining membrane being inflamed and thickened, and in the posterior lobe of the same hemisphere was found a cyst the size of a robin's egg, also filled with pus, but having no connection with the ventricle. The substance of the brain presented numerous red points, but was not altered in consistence.

A large proportion of the above cases afford ample additional confirmation to the fact which I have already stated, that contraction of the pulmonary artery, which has, at a very early period of intra-uterine life, produced sufficient obstruction to prevent the complete development of the ventricular septum, may still fail to determine the persistence of the ductus arteriosus and foramen of Botal. But, although the inter-ventricular communication was large and free in several of the examples just cited, I am not acquainted with any instance of this class where the septum was in so imperfect a state as to leave the ventricular portion of the heart in the condition of a single cavity, while in not less than six of the instances where the auricular septum remained incomplete, the partition of the ventricles was found in a merely rudimentary state.

In the whole of the remaining instances of congenital arctation of the pulmonary artery with which I am acquainted, the ventricular septum was completely formed.

There appears to be no reason to believe that, in any of the class of cases at present under consideration, closure of the foramen ovale has occurred previously to birth. In the few instances where that remarkable aberration from the natural condition has been observed, there has existed a state of parts altogether different from that noticed in the above examples.

This question may possibly admit of dispute, but it seems to be in the last degree improbable that occlusion of the communication between the auricles should occur at a sufficiently early period in fœtal existence to become the means of preventing the full development of the ventricular septum.

---

[*] Medical Lectures, vol. ii. p. 247.

ON THE
NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,
AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from page 538.]

Part VI.

In continuation of this inquiry, we have, in the next place, to examine the very interesting question as to how far the immediate effects of inflammation are referable to the peculiar physical condition of the blood contained in the minute vessels of the affected part. These effects are, by all modern pathologists, described as consisting in:—1. The exudation of a serous or aqueo-albuminous fluid. 2. The effusion of coagulating lymph. 3. The extravasation of blood. Now, the consideration of each of these phenomena at the length to which its importance merits, is, on the present occasion, clearly impossible, inasmuch as it would involve the study of numerous difficult and complicated points connected with the pathology of dropsy, hæmorrhage, and the host of diseases originating in the exudation of coagulating lymph. I must, therefore, restrict myself to an attempt at demonstrating the dependence of these effects on the co-existing disorder of the circulation. The first point to be established is the identity of the primary effects of inflammation with those resulting from an unnaturally increased lateral pressure of the blood contained in the minute vessels of a part. And for this purpose it is only necessary to compare the phenomena just mentioned as constituting the immediate effects of the morbid condition designated by that word, with the results obtained in my experiments on the kidney, as described in the various tables. It must, in the next place, be shown that a tendency to a morbid increase in the lateral pressure of the blood contained in the affected part exists in every case of inflammation. *And this* tendency to an unnatural distribution of the blood's pressure in the capillaries, I have, in a preceding passage of this section, proved to be a necessary and inevitable consequence of that obstruction to the flow of blood through those vessels, which is universally recognized as an invariable accompaniment of the disease. This is, in fact, a self-evident proposition, if the existence of the local obstruction be admitted. It must therefore follow that the primary effects of inflammation, being identical with those produced by the unnatural condition of the blood so often alluded to, and which is, in some degree, always present in that disease, are clearly referable to that co-existing physical cause. Some remarks on the connection between the amount of increase in the lateral pressure of the capillary blood-columns, and the production of each effect, will interfere less with the general argument if deferred for a short time.

It now only remains to consider how far the remedies found useful in the treatment of inflammation are calculated to remove that local disorder of the circulation which invariably accompanies, and which I suppose to be identical with, that disease. The general principles of the treatment will be more fully discussed hereafter; but it is impossible to avoid noticing how closely the measures sanctioned by the experience of ages accord with the therapeutic indications which spring directly from the pathological views now advanced as to the nature of inflammation. For, with the exception of mercury and a few other articles of the materia medica of whose mode of operation we are wholly ignorant, the remedies employed with success in the treatment of inflammation will all be found to act by restoring the natural balance of the pressures acting on either surface of the capilliary blood-vessels. Now the most important pathological phenomenon which results from the existence of this disease, and the prevention and removal of which constitutes the chief object of our treatment, is the effusion into the adjacent cellular tissue of the serous and fibrinous portions of the blood. This effusion I have before stated to arise—1st, directly, from an increased lateral pressure of the blood contained within the minute porous vessels of the part; and 2ndly, indirectly, by diminished support to, or pressure on, the exterior of those vessels. It is evident, therefore, that a successful plan of treatment must embrace, and be based upon, an observance of the two opposite conditions to those just specified. We accordingly, as the general principles of treatment, endeavour—1st, to diminish the lateral pressure of the blood contained in the minute vessels of the inflamed part; 2ndly, to increase the pressure acting on the exterior of those vessels.

The first point is attained by blood-letting, purgatives, and all other evacuants; by digitalis, colchicum, and other substances which possess the power of reducing the heart's action; and, after depletion in strong subjects, or primarily in asthenic systems, by derivatives or counter-irritants. These measures, with the exception of the last-mentioned group, act by diminishing the general pressure of the arterial blood in the system; derivatives can of course only indirectly reduce the pressure of the blood-columns in the inflamed part by diverting a larger proportion of the arterial blood to other vessels.

The measures which accomplish the second indication are, mechanical support, friction, cold, and astringents. The removal of any sources of impediment to the return of blood from the part, and an attention, where practicable, to its position, are beneficial observances, which are of course in perfect unison with the preceding therapeutic principles.

The result of this examination is, I think, the perfect demonstration of the truth of my proposition — that the morbidly-increased lateral pressure of the capillary blood-columns, which invariably accompanies inflammation, is directly referable to the causes, productive of the symptoms and effects, and relieved by the measures adopted for the treatment of that disease. What then, I ask, constitutes the distinction between the group of pathological phenomena designated by the word inflammation, and the local disorder in the physical condition of the blood which occasions those symptoms and effects? Or, which more correctly represents the disease? For, in the one case, we have described a deviation from the natural state of the local circulation, *which can be shewn to constitute the connecting link between* the operation of the causes, and the production of the effects of a certain pathological condition: while, in the other, we are told to recognise, in certain visible effects of an imperceptible and unknown cause, a disease the essential nature, seat, and origin of which are buried in obscurity. I contend, therefore, that the peculiar physical disorder of the blood contained in the minute vessels of the affected part constitutes that central link in the chain of causes and effects which was required to complete our knowledge of the pathology of inflammation. And by the recognition of this as the morbid condition essentially constituting that disease, much of the darkness now enveloping the causation of numerous pathological phenomena will be dispelled, many conflicting opinions and modes of treatment will be reconciled, and a new lustre will be reflected on that glorious discovery without which these disorders must ever have remained vital and unintelligible mysteries.

So far, then, as relates to the study of the nature of inflammation, any further remarks on the present occasion would perhaps be unnecessary; but it is impossible to leave this subject without alluding to congestion, a local disorder of the circulation admitted to bear a close resemblance to, but at the same time considered essentially distinct from, inflammation. In the literal acceptation of the word, congestion is evidently synonymous with hyperæmia; and, as this latter state also exists in inflammation, pathologists seem to have been not a little puzzled to lay down any clear and satisfactory method of distinguishing the two affections And it will not, I think, be found a very difficult task to shew that these two disorders of the capillary circulation are different forms of the same pathological condition; the distinction between them being founded on the degree of intensity, and not on any material variety in the nature of the unnatural state constituting the disease.

For the sole characteristic phenomenon now relied upon by pathologists as affording the means of distinguishing between inflammation and congestion, is the absence of fibrinous exudation in the latter morbid state, while it is represented as being an invariable accompaniment of the former. And in proof of the accuracy of this representation of the prevalent opinion on the question, it is only necessary for me to refer to the writings of Alison, Travers, Bennett, and others. Now, in my experiments on the kidney, I have met with fibrinous coagula in the urinary passages, and in one instance with a considerable quantity of coagulating lymph, as the effects of what I have been content to term an unnatural increase in the lateral pressure of the columns of blood contained within the minute vessels of that gland. I have, at the risk of appearing unnecessarily tedious, repeatedly alluded to this as the immediate cause of every species of effusion; others seem to prefer terming it a state of congestion. But, however we may designate the pathological state, the fact of fibrinous exudation occurring as one of its effects destroys the value of that phenomenon as peculiarly distinctive of inflammation. As will be seen from the experiments mentioned in the following part of this communication, the same pathological phenomena have followed the congestion of the renal vessels, whether that increased lateral pressure of the capillary blood-columns arose from venous obstruction, or from an artificially augmented flow of blood through the renal artery. It is true that the quantity of fibrine thus obtained was in many instances very minute, and that in several experiments it did not appear at all. But this circumstance is fully explicable by the difficulty of maintaining, at will, the pressure of the blood at the required point, and no higher, for a sufficient length of time. And one positive fact must, in experiments on a question of this kind, be considered to counterbalance a thousand failures. I contend, therefore, that this distinction between congestion and inflammation can no longer be maintained; for that whenever an adequate amount of compressing or expelling force acts upon the blood contained in the minute vessels of any part, the exudation of the fibrinous portion of the liquor sanguinis will then invariably take place. It is a purely mechanical process, and, as *such*, regulated by physical laws. We *must, then, in* order to explain its occurrence in some cases of obstructed capillary circulation, and its absence in others, trace the operation of the various physical and vital laws affecting the pressure of the blood contained within the minute vessels of the part, and not remain content with ascribing the variety in the effects witnessed to unknown and undemonstrable differences in the nature of the two disorders.

I might have added Dr. Billing's name to those of the other pathologists who suppose congestion to be distinguished from inflammation by the presence of fibrinous effusion in the latter, and its absence in the former case. But he is evidently disposed to attach less importance than the generality of writers on inflammation, to the maintenance of a distinction between the two disorders. For he speaks of them as "but varieties of distended vessels," and admits "the impossibility of drawing a line between inflammation and congestion, the one passing into the other by insensible shades."

And Dr. C. J. B. Williams, in his last work (Principles of Medicine), when speaking of the effects of congestion as existing in the kidney and elsewhere, advances views precisely identical with those which I had been led to entertain, both from the results of my experiments and from a general review of the circumstances connected with the pathology of granular disease of that organ. Thus, after remarking that the cause producing effusion is "distension of the vessels," and alluding to the influence of the "condition" or composition of the blood in modifying the nature of the effused matters, he proceeds to observe*,—"The same circumstances determine the character of the effused fluid. Where the blood is poor, the watery parts easily pass from congested vessels even without much distension, and contain but little albumen. But if the blood abounds in the protein compounds, more pressure is required before much effusion takes place; and then, when the pressure is great, the fluid effused often contains not only albumen in large proportion, but self-coagulating fibrin also†." . . . . . .

"Fluxes arising from congestion of

---

* Principles of Medicine, pp. 148-9. London, 1843.

† Ibid. p. 138.

tension exhibit an unusual
it of animal matter of an al-
ious or mucous kind, as instanced
ronchorrhœa, mucous diarrhœa,
eucorrhœa. I have been almost
ed to suppose that the polypous
etions and pseudo-membranous
occasionally effused on mucous
es may result from long-con-
l congestion. I have seen these
ated from the air-tubes in one
and in another from the intes-
from time to time, for months,
even years, without symptoms of
mation, but under circumstances
ring it probable that congestion
present *." Nevertheless, while
referring to congestion as to an
iate cause, the phenomenon con-
d by all other pathologists as
tially characteristic of inflamma-
Dr. Williams still endeavours to
lish a distinction between these
athological states. And, as will
en by a glance at the subjoined
itions, this distinction is founded
a difference in the velocity or
ve motion of the blood contained
ie minute vessels of the part.
congestion is defined as "excess
ood in a part, with diminished
n of that blood." Inflammation,
too much blood in a part, with
n (of that blood) partly increased,
y diminished." Now, even by the
r's own admission, the same state
e circulation, *in the vessels of the*
ted part, exists in *both* disorders;
e have in each, local hyperæmia,
a retardation or tendency to stag-
n of that accumulated blood.
distinction is, therefore, wholly
l upon the state of the circula-
in the adjacent vessels.
id, in fact, this definition of in-
mation seems to me to be merely a
ription of the immediate effects
ie local circulation of the obstruc-
of a few vessels, at a moment
n the heart's action is tolerably
rous. The phenomena described
therefore precisely what might
been expected to be visible under
microscope, when a minute quan-
of some irritating substance is
ied to the transparent structures of
animal. In this case, however,
ie obstruction is produced through
action of an irritant on the vital properties of the contractile tissues, the resulting pathological state is termed *inflammation*. Whereas, if the same physical phenomena followed the application of any purely *mechanical* cause of obstruction, such as pressure, or the ligature of a vein, the morbid state produced would, I presume, then be considered an instance of mere *congestion*. But as the ultimate effect of both classes of causes is the same, the only difference being that in the one case the local disorder of the circulation is a direct and immediate, in the other an indirect and secondary, consequence of their application, I cannot acquiesce in Dr. Williams' views on this point, nor can I perceive, in the circumstances dwelt upon by him, any adequate ground for regarding inflammation and congestion as two distinct diseases. For that increased motion of the blood in the surrounding vessels is a purely physical phenomenon, explicable on common hydraulic principles, and resulting from the additional force imparted to those columns of blood by the constant rush or flow through the anastomosing channels of the fluid pent up and accumulated in the vessels leading to the obstructed capillaries.

[To be continued.]

DISLOCATION OF THE ULNA.

Isolated dislocation of the ulna—that is, the radius retaining its natural relations to the humerus—is considered by some authors impossible, and by all, we believe, very rare. M. Petrequin, on the contrary, thinks partial dislocation of the ulna a very frequent accident, and says he has ascertained that the radius usually remains *in situ*; he attaches considerable importance to this remark, as the mode of reduction should, he maintains, vary accordingly as the radius is displaced or not. If both bones of the fore-arm are displaced, extension should be made while the fore-arm is pronated, so as to act on both bones in a right line; if the ulna alone is luxated, M. Petrequin thinks the reduction is best effected during supination of the fore-arm, and employs the radius as a lever, and point d'appui, resting the epicondyle on his knee, and abducting the arm, which tends to separate the opposed surfaces of the humerus and of the ulna, and greatly facilitates the reduction. In this manner he reduced two dislocations, one of 7 weeks, the other of 101 days standing.—Petrequin's *Traité d'Anatomie* Médico-Chirurgicale.

---

* Ibid. p. 196.

CASES TREATED IN

THE WESTMINSTER HOSPITAL.

REPORTED BY

Mr. F. Wildbore, M.R.C.S.L.

House-Surgeon.

CASES OF INJURY TO BONES OR JOINTS.

Fracture of the Acromion Process from sudden muscular contraction.

Richard Morley, æt. 45, a butler, was admitted under Mr. Phillips on the 24th of February of the present year, for an injury to his shoulder, which he had met with a few days previously. He stated that he was putting a candle in a lamp in his master's dining-room, when the spring suddenly projected the candle out of the lamp to some height. He raised his arm suddenly to catch it; he felt something give way, and the limb fell powerless by his side. On examination a large portion of the acromion process was found to be detached from the scapula. Crepitus was felt most distinctly in raising the arm perpendicularly. The man was in the enjoyment of tolerable health; he had never suffered from rheumatism, nor could any trace of syphilitic affection be discovered.

The arm was put up in the usual way, and at the end of six weeks he was discharged, with the fractured surfaces united, and with a fair amount of motion of the shoulder.

Fracture of the Clavicle from muscular action.

George Gerrard, æt. 46, a carman, was placed in Henry Hoare ward, under the care of Mr. Phillips, for fracture of the clavicle, just external to the clavicular insertion of the sterno-cleido-mastoid muscle. There was considerable swelling around the fracture, and, as it was in the immediate neighbourhood of the subclavian artery, it was considered proper to have him in the hospital. He stated "that on giving his horse a back-handed blow with his whip, he felt something suddenly give way; the arm fell powerless by his side, and he was unable to raise it again." For some months previous to the accident he had felt a pain at the seat of fracture, which he attributed to using a machine for cutting chaff. His general health was very good. No constitutional derangement betrayed itself to make it probable that any previous disease of the bone existed.

Fracture of the Femur, simulating dislocation on the dorsum ilii.

Joseph Ferris, a brushmaker, 46 years of age, was brought to the hospital on the 1st of May of the present year, with symptoms of a dislocation of his left hip on the dorsum of the ilium. The limb was shortened from an inch and a half to two inches, the toes inverted, and lying on the instep of the opposite foot, and this even when he was placed in the erect position; and the thigh reclined upon its fellow. On proceeding to examine the limb, it was found that it could be freely moved and bent on the pelvis, that extension steadily kept up for some minutes reduced it to its proper length, and that, on rotating the foot when extended, the left trochanter described a much smaller circle than the right one, and an indistinct crepitus was detected above the trochanter.

The accident happened a few minutes previous to his admission; he was at the time intoxicated, and he stated that he was wrestling with some companions; that he was thrown with violence on his side, and struck the trochanter. On attempting to rise, he found that he had lost the use of his limb.

In this case Liston's long splint was used; he was kept on his back for seven weeks, and at the end of that period he was allowed to go about with crutches. The limb was slightly shortened, but he could bear the weight of his body upon it tolerably well. The shortening arose in all probability from his removing the pelvis strap a few days after the fracture had been put up.

This case must be added to the few on record where fracture of the neck of the femur was accompanied by inversion of the foot.

Displacement of the surfaces of the Elbow-joint, with, possibly, Fracture of the Coronoid Process.

Peter Hart, a labouring man, 33 years of age, was brought from the House of Lords, on the 26th of January, with displacement of the bones of the elbow-joint. The arm was semiflexed; the internal condyle of the humerus projected forcibly against the skin at the inner side of the joint; the olecranon was very prominent backwards; and the head of the radius, completely disarticulated, could be grasped, and was distinctly felt to rotate under the cuticle externally. Pronation and supination of the hand was not at all interfered with; but flexion and extension were very limited. It was considered to be a lateral displacement of the humerus, and that the sigmoid cavity of the ulna was resting on the articular surface, on which plays the head of the radius. The humerus was fixed, and, the fore-arm being firmly grasped, extension was made and kept up for some minutes; the fingers of one hand being, at the same time, forcibly pressed against the internal condyle. The man became faint, and the joint assumed its natural form. He stated that the hand was resting on a windlass, with a portion of the machine in his grasp, when the handle suddenly revolved, and struck him on the arm immediately above the condyles. Considerable inflammation of the joint followed, and he was admitted into the hospital, under the care of Mr. Phillips. Leeches and tartar emetic quickly subdued the inflammation, and, at the end of three weeks, he left by his own request, with the limb natural in every respect.

Dislocation of the Ulna backwards, and the Radius forwards.

A delicate little boy, 12 years of age, named Henry Jones, was placed in Henry Hoare ward, on the 18th of Sept. with severe injury to his elbow-joint. The joint was enormously swollen, and acutely painful. The limb was semiflexed at not quite a right angle; and the hand was slightly pronated. The hand could be pronated; but supination was entirely lost. Leeches were applied to abate the pain, and tartar emetic was given internally. It was necessary to repeat the leeches several times; and it was not until the 8th day after the injury that the swelling and inflammation had sufficiently abated to allow of an accurate examination. In addition to the semiflexed position of the joint, the slight pronation of the hand, and the limited degree of flexion pointing out a dislocation of the radius forwards upon the humerus when first admitted, the head of that bone was felt to rest upon the outer condyle, and the olecranon process of the ulna formed a great projection backwards, which clearly depended upon a dislocation of that bone. In all probability the coronoid process of the ulna was fractured. The displaced bones were reduced in the following way:—The humerus was fixed by an assistant, and the palm of the hand was firmly grasped and supinated; the thumb of the left hand of the operator being at the same time placed upon the head of the radius, with the fingers pressing against the olecranon. When extension had been kept up in this way for a few minutes, the forearm was suddenly flexed, and the joint assumed its natural form. A few leeches were afterwards necessary to abate the inflammation set up by the reduction.

This is one of four cases which have occurred within the last month of dislocation of the radius forwards. Two of them were simple cases; the third was complicated with fracture of the ulna about its centre. The patients were all delicate—all fed-children, between the ages of ten and fourteen. No difficulty was experienced in reducing them in the manner above described. The rectangular-jointed splint was placed on the anterior aspect of the arm, with the angle well fitted into the bend, and each case has done well.

WOUND OF THE BLADDER—RECOVERY.

BY DR. BRESCIANI DE BORSA,
OF VERONA.

A YOUNG man, in a scuffle with a companion, was stabbed by him in the hypogastric region with a knife. The instrument penetrated the bladder; but this viscus being distended by reason of his having been drinking, the wound occurred below the peritoneal fold. The urine became immediately diffused about the neighbouring parts, and as soon as he was brought to the hospital a catheter was introduced, through which a great deal of blood and urine flowed. The external wound in the abdomen was closed by adhesive plaster, and in the course of the cure bleeding was practised. His recovery was rapid, and so complete, that he was enabled to be received a soldier. He died in a few months of some febrile affection, the cicatrix continuing sound. Wounds of the [fundus of the] bladder by cutting instruments are rare, for Larrey only mentions one case, although those arising from fire-arms are frequent. Samuel Cooper, however, mentions a case much resembling the above in his Dictionary.—*Med.-Chir. Review.*

MEDICAL GAZETTE.

FRIDAY, OCT. 23, 1846.

IN a former number of this journal, we gave a brief analysis of the Bill, introduced at the close of the last Session of Parliament, for the Registration of Medical Practitioners in Great Britain and Ireland *. We subsequently announced that it had been postponed in consequence of certain objections to its provisions, emanating from the Royal Colleges of Physicians and Surgeons, and the Society of Apothecaries. We have just received from the last mentioned body a printed statement, containing a full exposition of the grounds on which they "felt it their duty to oppose the further progress of the measure;" and, as it is only fair to act upon the principle of *audi alteram partem*, we most willingly give our space to an exposition of their views.

It is alleged, in the first place, that the title of the Bill is not in accordance with its provisions; and they point to a discrepancy which occurs in the schedule, in which the title is differently quoted.

"The Bill purports to be 'A Bill for the Registration of Medical Practitioners in Great Britain and Ireland,' or, as its title is quoted in the Schedule of the Bill, 'An act for the Registration of *the legally qualified* Practitioners of Medicine in Great Britain and Ireland.' A Bill professing no other object than to secure an authorized registration of legally qualified Practitioners in Medicine, was unlikely to provoke opposition from any quarter, and had the Society of Apothecaries been content to take the measure upon trust, and to judge of the scope of the Bill from its title, they would have given a ready assent to its passing into a law."

The preamble renders it clear that the object of the Bill, whatever its title, was to register *legally qualified* practitioners only; and to this the Society, had the measure been restricted to this object, would, according to their admission, have given a ready assent. On a close examination of the Bill, they had, however, reason to believe that it would effect very important changes in the law, of the expediency of which they entertained very grave doubts. In short, it appears to them to have been a measure which would have substantially repealed their own Act, and have enabled the member of any Scotch or Irish college or university to invade the exclusive privileges of English practice, now possessed by their own Licentiates.

"To enable an individual to engage in the practice of Medicine in England without committing a breach of the law, certain known qualifications are demanded from him. It is unnecessary to specify those qualifications, as they are familiar to the Members of the Medical Profession. Suffice it to say, that as the law now stands, an individual who may have acquired a legal qualification to practise as a Physician, Surgeon, or Apothecary in Ireland or Scotland, is not entitled in respect of such Irish or Scotch qualification to practise as a Physician, Surgeon, or Apothecary in England; and, therefore, if an Act were to pass which directed a registration of the legally qualified Practitioners in this country, such persons as were in possession only of a qualification to practise in Ireland or Scotland would not be able to claim registration under it. It will be observed, that the Society are not at present expressing any opinion upon the expediency of such a law; they are simply stating that such would be the operation of an Act which provided for the registration of the legally qualified Practitioners of *this* country.

"Now, the Bill in question proposed to authorize the registration on the *English* Register of any person who should have taken a degree in Medicine at any Irish or Scotch University, or have obtained a diploma, certificate, or license, from any Irish or Scotch College or Hall, and any such person would, as a result of such registration, have acquired the rights and privileges of a legally qualified English Practitioner. Such at least is the opinion which the Society have formed from the language of the Bill, and it is, of course, from the language of the Bill only that the Profession or the public can judge of its intended operation.

---

* Page 331

"If it was in fact the intention of the Bill to admit on the English Register all persons who had obtained a qualification to practise *any branch* of the Profession in *any part* of the three kingdoms, and to give to such persons, on obtaining a Certificate of Registration, all the privileges of an English Practitioner, it is obvious that an important change in the law was contemplated, and that the legal right to practise Medicine in this country would have been conferred on a very large class of individuals who do not at present enjoy that right."

We cannot pretend to say what may have been the intention of the framers of this measure; but, as it will be seen by our previous remarks*, we believed, from the preamble and wording of the fourth clause, that a *bonâ fide* registration of legally-qualified practitioners only was contemplated; and that there was no intention to invade the substantial rights and privileges of the Universities and Colleges. In a new legislative measure, there is great difficulty in finding terms which shall not be open to misconstruction. Sometimes, indeed, by the vague expressions used, or by one clause conflicting with another, injustice is done where a public benefit was intended to be conferred; and thus we have every session a series of Acts which are required to "amend and explain Acts" passed in a previous session.

With the exception of one clause, upon which we shall presently make a remark, it does not appear to us that the Bill contemplated that change in the law which it is alleged by the Society it would, if passed, have effected; and, with respect to this clause, as such a result is inconsistent with the general principles of the measure, we are inclined to regard the ambiguity of language as arising from accident, and not from any intention to repeal secretly, and without some equivalent benefit, the provisions of the Apothecaries' Act.

The Society allege that the Bill authorized the registration, on the *English* register, of any person who should have a degree in medicine at any Irish or Scotch University. But different registrars were to be appointed for England, Scotland, and Ireland; and the fourth clause was to the effect, "that the several registrars shall issue certificates, according to the form in Schedule B (in which form the word [England] is placed in brackets, in order that it might, according to circumstances, be replaced by the words Scotland or Ireland), to every person who shall have been registered as aforesaid, and shall apply for the same, and state his then place of abode. Provided always, that the said registrars shall issue such certificates for that part of Great Britain and Ireland only for which they shall severally be appointed to act."

The previous clause of the measure is certainly so worded, that the construction put upon it by the Society might turn out to be correct; for it is not there stated, as it ought to have been, that the registrar of each country shall register the diplomas issued only in the country to which he is appointed. If, however, it had really been the intention of the framers of the Bill, in thus registering practitioners, to overturn all the rights and privileges of existing corporations, we do not see why there should have been the cumbrous machinery and heavy expense of three registration offices in the three kingdoms. We therefore regard this as an omission—a want of explicitness, which will admit of an easy remedy.

---

* Page 331.

The views of the Society will be further understood from the following extracts:—

"If it should be said that the Society have misapprehended the purport of the Bill; that its object was simply to secure a registration of all such Medical Practitioners as had satisfied some competent authority of their having acquired a certain amount of professional knowledge, and thus enable the public to distinguish between those who had been educated as medical men, and those who had not; and that the Bill did not propose, by admitting such persons to registration, to give them any legal title to practise which they did not already possess; the Society can only reply, that they are advised that the actual operation of the Bill would have far outstripped any such intentions: and, that such would have been the case, the Society think will be apparent from the following considerations.

"Under the provisions of the Bill, all persons who had obtained a medical degree, diploma, or license, from any university, college, or hall, in either of the three kingdoms, were entitled to registration in England. Take, for instance, the case of an individual who had obtained a medical degree from a Scotch university. Such a degree, as the law now stands, confers no right to practise medicine in England; but it would have entitled the graduate to demand a Certificate of Registration under this Bill. The *form* of the Certificate is given in the Schedule, and is important. The Registrar certifies that, by virtue of the powers vested in him, by 'An Act for the Registration of the legally qualified Practitioners of Medicine in Great Britian and Ireland,' A. B. has been duly registered according to the provisions of the said Act, as a Member of the Faculty of Medicine of England, and that he is entitled to all the powers and privileges conferred by the said Act.' Now, supposing the Bill had done nothing more than entitle the graduate in question to the possession of this Certificate, could it have been contended for a moment, that an *individual who* had been registered under an Act providing for the registration of *legally qualified Practitioners*, and whom the law had accredited as a member of the Faculty of Medicine of England, (whatever the meaning of that term may be,) was not *legally qualified* to practise medicine in England? The Bill, however, did not allow the question to rest upon the form of the Certificate of Registration. Not only did the Bill propose to exempt persons possessing the Certificate from being summoned on juries, and from serving corporate, parochial, and such like offices, but the Bill, as originally introduced, after providing that no person who did *not* possess the Certificate should be capable of acting in the capacity of a medical officer of any public institution, proceeded to enact, that 'Wherever by law it is provided that any act shall be done by a Physician, Surgeon, Apothecary, or Medical or Surgical Practitioner, by whatever name or title called, such provision *shall be construed*, after the passing of the Act, *to mean a person possessing a Certificate in force according to the provisions of this Act, and such persons only.*' The language of this paragraph appears to admit of only one construction, namely, that the possession of the Certificate was to confer *a legal title to practise.*"[*].

From this statement we gather that the Society do not object to a measure whereby the names of all licensed practitioners may be enrolled in a register easily accessible to the public; but they are opposed to the introduction of any organic changes, in respect to the present rights and privileges of practitioners, into a Bill which professes to be for the purposes of registration only. We have, on more than one occasion, pronounced an opinion that all British practitioners should enjoy equal privileges, but certainly not under the present anomalous condition of *sixteen* or *seventeen* different colleges and corporations possessing the power of granting licenses on different grounds of qualification, and under different rms of examination! This would be roductive of great mischief; for, withat making any invidious comparisons f the curricula, periods of study, and rms of examination, in the different olleges and Halls of the three counies, it is quite sufficient to state that, s matters now stand, the same legal rivileges would, by a sweeping change f this kind, be conferred upon persons ost unequally qualified to practise edicine and surgery. It will be quite me for this reform, when the sixteen censing bodies are reduced to six, or en, by joint-boards, to three; and hen there is some guarantee that there ill be uniformity of education, and an ual test, by a searching examination, the qualifications of all candidates ho present themselves for a diploma. We consider it unnecessary to enter to certain minor objections which e Society have urged against the easure, as, in our judgment, they ould be completely outweighed by the iblication of a good annual register all persons licensed to practise. At esent, it is quite impossible to know ho is and who is not of the profession; id we trust that the *ne quid nimis* inciple will lead those who take arge of the Registration Bill in the xt session, so to frame its provisions at it may strictly correspond to its le, and thus lead to, at least, one inlment of medical reform, which will able the public to draw a broad line distinction between licensed and licensed practitioners.

---

[*] This paragraph was omitted from the Bill as "amended in Committee."

TROPINE A SUBSTITUTE FOR EXTRACT OF BELLADONNA.

diseases of the eye, M. Bérard is in the bit of employing atropine for the purpose dilating the pupil. It acts with great idity in a small dose, and has the advane of not disfiguring the patient, like the tract of belladonna. The lotion which he s employed for this purpose, consists of m three-quarters of a grain to a grain and alf of atropine, dissolved in five drachms of ter.

Reviews.

Elements of the Theory and Practice of Medicine: designed for the use of Students and Junior Practitioners. By GEORGE GREGORY, M.D. &c. Sixth Edition. With numerous Additions and Alterations. 8vo. pp. 799. London: Renshaw. 1846.

THAT a work of this description should have reached a sixth edition, and have been found in the hands of successive generations of students during a quarter of a century, is undoubtedly a strong test of its merit. Medical books soon find their proper level in the estimation of the profession; a work replete with specious fallacies, and false facts cleverly devised and boldly set forth, may attract notice for the time, and gain a short-lived reputation for its author. But attention leads to investigation, and it is fortunate for science that there is no fact that one man can propound which does not admit of being completely sifted and analysed by his contemporaries; and thus it happily occurs that no work in which, to say the least, the true does not preponderate over the untrue, can long claim the favour of the profession. Students, too, are no bad judges in these matters. A man who knows himself to be sentenced to read through the greater portion of the contents of a good-sized library within the brief space of six and thirty months, soon learns almost instinctively to select those works only which are best calculated to answer his purpose: and thus it happens that, except in the cases of a few erratic geniuses, it is very rare to find a pupil engaged in perusing any other than a really standard production.

Dr. Gregory's text-book has long since gained, and has, upon the whole, not been undeserving of this distinction. The larger proportion of its contents are sound and practical, and would do honour to any physician; but, with this commendation, we must pause, as we regret to find that there are some pages in the work that contain doctrines which we are really surprised that any physician should attempt to inculcate in the present day, and which, if implicitly adopted by the student, could not fail to produce the most disastrous results in his practice.

We shall now allude to these blemishes as briefly as possible. The many valuable portions of Dr. Gregory's work would afford far more favourable scope for quotation, but we feel it to be incumbent upon us not to pass over serious practical errors in a work intended for students.

After giving a brief sketch of the pathology and symptoms of hydrothorax, œdema of the lungs, and hydropericardium, the author thus describes the treatment of these diseases, under the head of "Treatment of Thoracic Dropsy:"—

> "The only peculiarity worthy of note is, that here the influence of diuretic medicines is more decided than in any other form of dropsy, and that digitalis is of all others the most generally successful. The infusion, beginning with the dose of three drachms three times a day, and gradually augmenting it to six, is upon the whole the best form. It may be advantageously united with aromatics and other diuretics, as in the following form" (pp. 263-4).

We need not reprint the prescription with which this curt account of treatment is concluded.

Now, we have not the slightest hesitation in stating, that, although Dr. Gregory has probably gained his opinion of the good effects of digitalis in hydrothorax and hydropericardium from the observation of cases carefully chosen as susceptible of relief by such a remedy, the practice enjoined in the above paragraph is decidedly bad. Passing over the fact, that, in nearly all cases where the effusions have depended upon pleurisy or pericarditis, diuretics will have no power whatever to produce their absorption, we refer the reader to Dr. Gregory's statement of the truism that, among other causes, hydrothorax may occur as the result of organic diseases of the heart and great vessels: to this we add, that the most frequent and the most dangerous causes of effusions of serum into the pleuræ and pericardium are organic cardiac and pulmonary obstructions of long standing, and of the most severe description, attended with dilatation, thinning, engorgement, and failing power of the heart; conditions in which even the most strenuous advocates of the virtues of digitalis in heart affections admit that the continued administration of the remedy would be an act of the most culpable rashness. Where the kidneys are free from disease, or can be relieved from the engorgement from which they usually suffer in severe cases of thoracic obstruction, the action of direct diuretics will frequently effect much good, and can rarely do any serious harm either in these or in any other forms of dropsical effusion. In cases of dropsy where the heart is sound, no diuretic acts so well as digitalis, or produces the removal of the effusions so rapidly, but the instances of hydrothorax in which no cardiac lesion is discoverable form the exceptions rather than the rule; and, where the pericardium is distended with fluid, the heart's action is, of course, always dangerously interfered with. We therefore enter our most unhesitating protest against the indiscriminate employment of digitalis in cases of this description.

In another part of the work we find the author running into an opposite error, which appears to us to be even more dangerous than that to which we have already alluded. In speaking of the treatment of albuminuria and its complications, Dr. Gregory writes as follows:—

> "The dropsical accumulation must be removed, as far as possible, by purgatives and diuretics. The secretions of the skin are to be encouraged by the use of warm baths and diaphoretics. Dr. Osborne remarks, that, when the renal affection is uncomplicated with other organic mischief, the dropsy will disappear on restoring the functions of the skin. Opinions vary as to the propriety of employing mercury in the granular degeneration of the kidney. Instances of recovery are recorded after severe salivation, but the general impression is, that the mercurial influence is prejudicial rather than salutary" (p. 692).

The most valuable practical result of Dr. Bright's discovery has been, that practitioners have learned to appreciate the danger which attended the old practice of employing diuretics indiscriminately in all cases of dropsy. We believed that there was no physician in the present day who was unaware of the fact that, as a general rule, the use of direct diuretics, *i. e.* of medicines which have the power of stimulating the kidneys, is to be absolutely avoided in nearly all cases of renal disease

vith the secretion of albumi-
:. The employment of digi-
ndirect diuretic, effects, it is
much benefit in cases of
ısy, where the heart is sound,
s harm in dropsical affec-
nding upon cardiac obstruc-
dilatation; and, in a few
selected renal cases, where
idered that the glands are
a relaxed than in an in-
ondition, even cantharides
given with impunity. The
cation of treatment in cases
nuria, however, is to relieve
rs from all causes of irritation
action as much as possible.
ould as soon let loose a tiger
:d from the jungles of Bengal
rds of a London hospital, as
ıe whole of the renal cases in
e to the mercies of a young
who was fully convinced
se of diuretics forms a leading
ı the treatment of such pa-
Vith regard to the statement
: patients with renal disease
vered after severe salivation,
cautious hint that, in this
the mercurial influence is
l rather than salutary, we
say, that we have long consi-
to be a law in medicine,
upon the results of many
: cases, that—except in a few
of very rare occurrence—the
rcury in any form of Bright's
ı wholly inadmissible. We
the misfortune to witness
vhich patients suffering from
ra were accidentally salivated,
led us to the conclusion, first,
erson who recovered under
:umstances may afterwards
e excuse for imagining that
ses the gift of immortality;
ndly, that any practitioner
r having witnessed one of
rful cases, rashly places a
tient in like jeopardy, is guilty
ime of homicide, and should
ordingly.*

The author entirely passes over the treatment of those severe forms of inflammation of the large serous membranes which so frequently destroy life in cases of renal disease. It is true that very few instances occur in which the mischief is amenable to any therapeutic measures whatever, but there are means by which injudicious treatment may aggravate these diseases, and a practitioner would certainly be unpardonable in treating them according to the rules which Dr. Gregory has laid down for the management of serous inflammations in general. This remark leads us to make a few comments upon the author's mode of describing the treatment of certain acute inflammatory diseases.

Dr. Gregory still adopts the old and injudicious practice of merely describing the nature and treatment of what are considered to be the typical forms of diseases; that is, the characters which they are liable to present, and the management which they require under their least complicated forms, and in persons who have hitherto enjoyed robust health. A work which contained this, and no more, would be useless,—nay, far worse than useless. Upon the whole, the instances in which healthy persons become suddenly attacked with dangerous maladies form exceptions to the rule in practice; and, although there are situations in which diseases present themselves in their most sthenic forms, nine-tenths of the instances of disease which occur all over the world are as far removed as possible in their type from those which are described in medical text-books. Let our readers judge for themselves how far the following plan of treating pleurisy would be found available in London, especially in hospital practice.

"*Treatment of acute pleurisy.* — The power of venesection in controlling pleuritic inflammation was well known to Hippocrates and Aretæus, and this remedy *should never be omitted* except *on very special* occasions:" [we have given these words in italics]. A pound of blood is an average bleeding for an adult male. The patient should be bled from a large orifice, and in strong habits the blood may be allowed to flow till the patient can draw a full breath

---

aware that, in certain cases of renal
s difficult to avoid the use of mer-
when the physician's mind is fully
danger which attends the practice.
f this description will sometimes be
tacked with such intense symptoms
ia, pericarditis, &c. that his attendant
lled to adopt the alternative of admi-
ercury rather than of permitting the
roceed unchecked. This practice is,
ll of peril, and usually fails; but its
excusable, as it is merely *the election* of that which is conceived to be the least of two great evils. Our remarks have reference to the use of mercury as an ordinary medicine in cases of renal disease.

with comparative ease." [What quantity of blood would have to be abstracted before the patient could take a full inspiration in a case where the lung was greatly compressed by pleuritic effusion?] "The bleeding may be repeated at proper intervals so long as pain endures, pain being a better criterion of such necessity than any stethoscopic indications. A severe case of pleurisy is seldom cured without the loss of fifty ounces of blood. Leeches and cupping-glasses to the side may be substituted where the weakness of habit prohibits recourse to general bleeding. Fomentations and poultices to the side may follow the application of leeches. Cold spirituous lotions to the part affected are sometimes productive of great comfort. Saline diuretics and occasional aperients form part of the appropriate treatment, but any attempt to cure unequivocal pleurisy by purgative medicine should be discountenanced. The skin may be encouraged to diaphoresis by small but frequently repeated doses of James's powder and opium, to which a small proportion of calomel may be added. At a more advanced period a blister may be applied, or the side may be rubbed with the mercurial liniment," (pp. 429-30).

Let the student, after reading this, enter any one of our large metropolitan hospitals, and inquire of the first experienced physician whom he meets there, in how many cases of Londoners suffering from pleurisy treated in that house during the last five years, he has effected a cure by the abstraction of fifty ounces of blood, assisted by small but repeated doses of James's powder, opium, and calomel. Should he reply, in three cases out of fifty, we should consider that he has had opportunities of pursuing depleting measures to an extent which are very rarely afforded to London practitioners. The mere hint that leeching and cupping must be employed, where the weakness of habit prohibits recourse to general bleeding, could not make the slightest effect upon the learner's mind, following, as it does, immediately upon the assertion that severe cases of pleurisy are seldom cured without the loss of fifty ounces of blood. The fact really is, that in the *most* severe cases of pleurisy we cannot dare to bleed at all, or, at any rate, we know that the amount of bleeding which we could use without producing fatal exhaustion would have no effect whatever in checking the disease. *Many* a patient with pleurisy can no more bear the loss of twelve ounces of blood, than can one who is sinking in the latter stage of typhus. The same style of treatment is recommended in cases of peritonitis, pneumonia, (which our author still calls "peripneumony"), &c. &c. The fault here rests less with the author than with those who originated the custom which he has adopted. We believe that few causes have led to a greater destruction of life, by inexperienced practitioners, than this style of describing merely the typical forms of disease, without giving any sufficient allusion to those innumerable exceptional cases which are continually occurring, and which, common as they are, utterly confound the mere book-student as soon as he begins to meet with them in practice. We thought this very objectionable plan had been altogether discarded, until we met with it again in the work before us. The least that can be expected from a writer on the practice of physic is, that he should divide the maladies which he pourtrays into the "taxic" and the "ataxic," the sthenic or the asthenic, and make very express allusion to the treatment which should be adopted in inflammatory diseases as they occur in persons of vitiated and shattered constitutions.

We are unable to speak in higher terms of the author's treatment of Acute Dysentery. We cannot afford space for the whole of his remarks upon this subject, but the following extract contains all that he has said with regard to the treatment of the disease as it occurs in this climate.

"If the pain be constant and severe, and the pulse strong or cordy, blood should be taken from the arm, particularly in a case which comes early under treatment; but the employment of *purgatives* constitutes the most important feature of the cure of dysentery. They must be steadily persisted in until *fœcal* evacuations have been produced, and that sensation of load in the bowels removed which leads to the effort of straining. When that object has been completely attained, *and not till then*, may the practitioner desist from the free use of his cathartics. Almost every kind of purgative medicine has been tried, and at different times recommended. Provided a due effect be produced, it does not appear to be of much consequence which of them is selected, but the liquid form is generally to be preferred. A pill of six grains of calomel, followed immediately by an ounce of the sulphate of agnesia, will commonly be found to answer well. In some cases the oleum ricini may e preferable. Ipecacuanha, in the dose of hree or four grains, combined with the extract of gentian, and frequently repeated, as been found very useful in London. If he stomach reject these medicines, some ther form of cathartic is to be chosen, uch as the compound extract of colocynth, o which a proportion of opium may be dded, with the view of allaying irritation. Purgative enemata are found insufficient to vercome the disease. An ointment containing opium applied to the anus after very loose motion will greatly relieve the marting which the acrid secretions of the owels produce. When proper fæcal vacuations have been produced, it will enerally be proper to continue the use of perient medicines, but in smaller doses" until when?). "If, after that, pain and iarrhoea continue, anodyne draughts, nd mucilaginous anodyne injections will e required. The pulv. ipec. comp. ither in the dose of fifteen grains at bedime, or of six grains every six hours, is well adapted to this state of the disease. It promotes perspiration, a proper attention to which is very requisite during the whole course of the complaint. The effect of this medicine will be very materially aided by the warm bath." (pp. 574—5.)

Although acute dysentery does not, or at least, *should not*, commonly destroy life in this country, it is difficult to resist the impression that the above detail is sketched from a mode of treatment which the author has employed, or, more probably, has seen employed in certain *fatal* cases of the disease. We have good reason to be acquainted with acute dysentery, as it occurs in this climate; and we cannot help shuddering at the thought of what would be the effects of rendering a purgative course the main indication to be pursued throughout an ordinary case of this malady. Imagine a practitioner continuing to administer large doses of calomel and sulphate of magnesia, or of compound extract of colocynth and opium, or it might be of scammony, croton oil, or elaterium —for it seems that any purgative that will produce fæculent stools, and may be given in a liquid form, will do; imagine, we say, a man attempting to continue such doses as these until the tenesmus had ceased. Assuredly it never would cease but in death. We have always found that one of the arliest symptoms of dysentery is the free passage of large fæculent motions; and although portions of scybalæ usually remain, and require to be removed by aperients, we believe their evacuation may always be procured by one or two moderate doses of oleaginous purgatives, combined with opium. It will rarely be requisite that these aperients should act more than two or three times before we may adopt that soothing and anodyne plan which Dr. Gregory appears to consider merely as a resource to be employed when the pain and diarrhœa fail to be checked by the purgative medicines, but which we consider as a very important, and, indeed, almost indispensable part of the treatment.

We are inclined to think that the error and the danger with which Dr. Gregory's advice on this subject is undoubtedly fraught, arise less from any essential fault in his views regarding the treatment of dysentery, than from the extremely unfortunate style in which the above recommendation is worded. We do not believe that Dr. Gregory intended that strong cathartics should continue to be given in dysentery until the tenesmus ceased; that it matters little what purgatives are employed; and that milder aperients should continue to be used for an indefinite period after the more drastic cathartics have produced their effect. And we do not consider that he would pursue such a plan of treatment in any case or in any form of dysenteric disease. But a set of opinions more unsafely worded than those which we have extracted, it has never been our ill fortune to meet with in any modern treatise on medicine.

We regret to have been compelled to make these comments upon the work, for it is one which, with all its blemishes, (and it has many), presents many excellent features, and we know that it has been, and believe that it will still continue to be, read by many of the younger members of the profession. We trust that, should the work reach yet another edition, we shall be able to award it higher praise than that which it deserves at present; namely, that its merits are as numerous as its faults, but that a few more errors would have turned the scale.

Records of Harvey, in Extracts from the Journal of the Royal Hospital of St. Bartholomew, with Notes by **James Paget**, Warden of the Collegiate Establishment, and Lecturer on Physiology in the Hospital, Pamphlet. 8vo. pp. 43. London: Churchill. 1846.

An interesting monograph, bringing before us, in a series of memoranda, in the quaint language of the olden time, the circumstances connected with Harvey's appointment as "Physicon" of the Hospital, an office which he held for thirty-four years with great credit to himself and benefit to the institution. The appointment was conferred upon him on the 14th of October, 1609. The minutes develope some curious facts concerning the duties of physicians, and the payment which they received for their services in those days. Thus we are told that the Governors of the Hospital assigned to "Mr. Doctor Harvey, Physicon, a howse in West Smithfeild, late in the tenure of Widowe Allen," to live in; and in the same year we find that his stipend "beinge twenty-five pounds per annum, was augmented to the some of thirty-three pounds six shillings and eightpence, in consideracon that he doe relinquishe all his claime of any form^{r} graunt of a howse in West Smithfeild, late in the tenure of Widowe Allen," &c. Although this sum is equal to much more than the nominal amount in the present day, yet still it must be regarded as a very poor salary.

The articles drawn up by Harvey for the regulation of the hospital are interesting from the singular circumstances which characterised the management of these institutions two centuries ago. We shall probably transfer them to our pages. The pamphlet is concluded with some notes by Mr. Paget, explanatory of the quaint entries in the Hospital records. The publication of this monograph is highly creditable to Mr. Paget: it cannot fail to prove acceptable, not merely to the medical antiquary, but to all who take an interest in the history of the great worthies of our profession.

Elements of Physics. By C. F. **Peschel**, Principal of the Royal Military College at Dresden, translated from the German, with Notes, by E. **West**. Parts II. and III. Fcp. 8vo. pp. 316 and 271. London: 1846.

The first part of this work—treating of *Ponderable Bodies*, was briefly noticed in our 35th volume (p. 737.) The work is now completed by the publication of the remaining parts on *Imponderable Bodies*, and the favourable opinion which we have already expressed of it, is fully justified by the contents of the two parts before us. We have been particularly pleased with the sections on light and heat:—the descriptions are clear, the facts are well arranged, and the experiments often display great novelty and ingenuity. Independently of the subject of pure physics, which is fully treated, the work contains a large amount of chemical philosophy, and the author has throughout judiciously shown the application of the great doctrines of the science, to medicine and the useful arts.

The translation by Mr. West is so admirably executed, that it appears like an original work written in English. The illustrative woodcuts add greatly to the value of the explanations. Care has been taken to indicate the progress of the science by placing in an appendix a brief account of Moser's singular discovery respecting the influence of light on bodies, as well as of Faraday's experiments on the effect of magnetism on polarized light. Whether for reference or for study, we can strongly recommend Peschel's Physics to the medical student and practitioner. In a second edition we should advise the translator to introduce his mathematics in the shape of notes, instead of placing them in the body of the work. The sight of so many formulæ and equations in the text is apt to convey the impression, that the work is intended for mathematicians rather than for the large class of readers who look for results, in preference to the algebraic rules by which they are obtained.

Proceedings of Societies.

EDICAL SOCIETY OF LONDON.

Monday, October 19th.

MR. DENDY, PRESIDENT.

HE discussion on Mr. Pilcher's case was sumed.

Mr. **Stedman** could not understand in at way the brain could produce the disse, as supposed by Dr. Clutterbuck. He s more inclined to the opinion, that the al vessels might have been congested and larged, and produced the inordinate action the kidney.

Dr. **Clutterbuck** considered that our servations all tended to prove that the ain was the seat of voluntary motion, ellect, and sensation. Now, as he had d, there could be no disorder of function thout the organ which maintained that action being disordered. When he spoke organic disorder, it did not necessarily ply change of structure, for there might disordered action of an organ without ange of structure. He reprobated the satisfactory mode of treatment which had en resorted to, and considered that the mptoms which presented themselves were ficient to warrant us in inferring that ey had their origin in the brain, and to count for the fatal termination. The ralysis of the bladder, and the convulons, sufficiently indicated the brain to be ected. There were no abnormal appearces in any other organs sufficient to exin the disease, which he believed might ry well be questioned to be diabetes. The dney was not diseased; the intestines were ly "torpified;" the liver was unaffected: d the stomach did its duty. He did not lieve that the disease could be explained reference to any chemical changes in the ids.

Mr. **Stedman** could not regard the inion expressed by Dr. Clutterbuck to be rrect. He could understand, however, at irritation of the kidney, by reflex tion, might irritate the cerebellum.

Mr. **Pilcher** regarded the terms, funcnal and organic, as very useful, and was lling to admit that there could be no disder of function without organic disorder, t necessarily a change in the substance of e organ; the fluids only might be affected, d no change be detectable after death. e child had, no doubt, died of brain disse; but this had been the result of preous disease in the system. The heart, o, beat violently; but this depended on e anæmiated condition of the body, which d its origin in the urine *drawing off so much* of the nitrogenized constituents of the blood. There had been no symptom of brain disease, until a few hours before death, and the effusion observed post-mortem he believed was the consequence and not the cause of death. The change in the kidney was the consequence of the excessive secretion of that organ, and might have originated in the nervous system of that gland. Taking all the circumstances into consideration, he thought that the apparatus of digestion and assimilation was the first affected. There had been no palsy of bladder, no convulsion, except just before death. The brain in its functions was remarkably healthy.

Dr. **Theophilus Thompson** thought that if the brain had been in a normal state, it would have been materially affected by the change in the circulating fluid. Might we not draw an analogy between this case and one of hysteria, in which there is a great secretion of urine? He thought, with Dr. Clutterbuck, that the symptoms had been dependent on some material change in the nervous system.

Dr. **Garrod** said, that in hysteria and softening of the brain the urine was increased in quantity, though it was usually normal in quality, or of lower specific gravity than natural. In this case there was an enormous increase in the nitrogenized products of the urine.

Dr. **Chowne** observed, that in mania, generally, it was remarkable to observe how free from disease the patient was. Brain disease was more frequently induced by disease in other organs than *vice versâ*. There was always change of matter when there was change of function. The state of the digestive tube in this case, was sufficient, in his opinion, to explain the origin of the disease, without speculating as to a more occult cause.

Dr. G. O. **Rees** said, that Dr. Sutherland had lately observed that an alkaline condition of the urine was a frequent accompaniment of cerebral disease. He did not think, in the case under disscussion, that disease of the brain had been the cause of the inordinate action of the kidney. He regarded the case as one of diabetes insipidus in an advanced stage, in which uric acid was found in the urine instead of urea, in consequence of the deficiency of the red particles of the blood not producing sufficient oxygen to form urea.

Mr. **Headland** regretted that the brain had not been examined, though he did not expect that it would throw much light on the cause of the disease. He was inclined to look to some defective action of the skin as the *fons et origo* of the disease.

SOUTH LONDON MEDICAL SOCIETY.

October 15, 1846.

Charles Waterworth, Esq. President, in the Chair.

Mr. Robinson related the following case of diseased liver, and exhibited a portion of the diseased structure :—

M. B., æt. 39, was supposed to have died undelivered of twins in the sixth month of pregnancy. The author, invited to the autopsy, had not seen the patient whilst alive, but learnt the following particulars: that she was of temperate habits and of good health until six months back, when symptoms of pregnancy manifested themselves; the abdomen enlarged considerably, and felt heavier than in former pregnancies: sickness, at first only in the morning, was afterwards continued throughout the day, and for the last five days of life nothing was retained. She only experienced sharp pain, increased on pressure on left side of the abdomen, and leeches were applied with relief. The bowels were costive, motions dark and lumpy : towards the close of life she had a sensation of hacking in throat, and brought up a little blood, but had neither dyspnœa, cough, hiccup, pain in the region of the shoulder-blade, jaundice, or œdema. The urine was high coloured : exhaustion continued increasing until death.

On opening the greatly distended abdomen, it was found occupied by three lobulated tumors; two of these were large and solid; the other, which was small, was situated in the epigastric region. The liver, of enormous size, weighing 17½ lbs., occupied both hypochondria, extended on the right side completely, and on the left nearly to the iliac crista; it was hard, lobulated, and, excepting a small part posteriorly, appeared to be converted into large tumors, which, on being cut, had a striated appearance: most of these were depressed in the centre, their peritoneal covering having a puckered appearance, and being exceedingly loaded with some tortuous veins and some florid vessels. In the depressed portions of some of the tumors was coagulated blood, easily separable, except in one. The left side of the liver was adherent to the peritoneum lining the abdominal walls, which was in parts covered with lymph, in others with coagulated blood. A small quantity of blood-stained serum was found in the peritoneal sac. The portal and hepatic veins were free from deposit: the gall-bladder contained a little green bile. The small intestines were much compressed; a few scybalæ in the ascending and transverse colon: one small spot in the upper part of descending colon was interstitially thickened. The greater part of descending colon and sigmoid flexure was greatly contracted from pressure. Kidneys congested. The uterus, which was as large as it usually is at the sixth month of pregnancy, contained a foetus, and much green liquor amnii ; its lining membrane was vascular and softened. Placenta attached at the upper part. One small medullary tubercle was found on each side of uterine fundus immediately under the peritoneal coat. Thoracic viscera healthy.

The author then drew the attention of the Society to the size and structure of the liver ; the connection of the uterine tubercle with it ; the immunity from general symptoms until near the close of life ; the state of colon and uterus ; the little reliance to be placed on uterine movements and shape as diagnostic of twin-pregnancy : this to be most likely suspected when a sulcus could be felt extending from the fundus to the cervix uteri, and by the double pulsation of the fœtal heart. He considered the symptoms of peritonitis relieved by the leeches were probably due to distension caused by morbid growth, which had probably advanced with the pregnancy.

Dr. **Lever**, in answer to Mr. Robinson, did not think the child would have been viable ; the pregnant condition often masked the symptoms of disease. In illustration of which, he mentioned the case where the wife of a publican while drawing beer felt a pain in the right side, which was attributed in part to her pregnant condition, it being the seventh month ; notwithstanding leeching it increased in severity, and a child was expelled : collapse and death followed. On examination a large ovarian abscess was found to have burst into the peritoneum.

Dr. **Hughes** remarked on the difficulty of the diagnosis of tumors when complicated with pregnancy ; absence of symptoms and rapid growth were characteristic of fungoid affections. He believed the presence of dark bilious stools should be regarded with suspicion, especially when any tumor of a doubtful character existed. He related a case where a tumor in the epigastric region was considered to be a fæcal accumulation in the colon ; black-looking motions were passed, but there never was a bilious tinge of countenance, and good health had existed five months previous to admission into hospital. After death disease of a very aggravated character was found both in the liver and surrounding viscera.

Dr. **Oldham** did not think from his attempts to inject these growths that they were really vascular ; some large arteries might be injected, but hardly any veins. He considered pregnancy would rather retard than hasten these growths. In a case where a woman had died of symptoms of peritonitis, with supposed pregnancy, a fatty degenerated liver, weighing 14½ lbs., had been found.

Dr. **Barlow** inquired the character of the motions; whether similar to those of melœna, or merely of a dark green colour? The latter state would merely tend to prove the existence of a disordered state of liver. As regards the development of these tumors, he believed, of all malignant diseases, none were so rapid in growth as those of a tubercular character. A case was mentioned where the disease appeared to have run through its whole course in eight weeks. The superficial veins of the abdomen were often much enlarged.

Mr. **Robinson**, in answer to Mr. Crisp, stated that the tumors of the uterus and liver were identical in character. He did not consider the diagnosis of these tumors while pregnancy existed at all easy. He had known a case where symptoms had led him to suspect malignant growths, but those symptoms had disappeared on delivery.

Mr. **Collambell** alluded to a case at present under his care, where the surface of the liver could be felt distinctly nodulated. The patient was now in the sixth month of pregnancy. There was great distension of the superficial veins of the abdomen and lower extremities: the evacuations in this case varied from being quite black to a nearly white colour.

Mr. **Crisp** thought pregnancy had little to do with the increase of these tumors. The case last related by Mr. C. did not show great enlargement, but merely change of position of liver from the enlarging uterus: as regards black motions these were very characteristic of malignant disease of the liver.

Mr. **Evans** mentioned a case showing the quick growth of an abdominal tumor which was probably ovarian; and, in answer to Dr. Oldham, said he considered that, from the direction of the swelling, some malignant growth of the liver might be conjoined with a diseased ovary.

In answer to Mr. Crisp, Dr. Lever stated that he believed auscultation one of the most valuable means of diagnosing pregnancy, and that the uterine souffle might be heard as soon as the uterus reached the brim of the pelvis between the fourth and fifth month.

Dr. **Oldham** thought the fœtal heart might be heard as early as the twelfth week, but would not advise a decided opinion to be given before the fifth month. He believed that of all the signs of pregnancy before the uterus reached the brim, none was so valuable as a uniform rotundity of the anterior surface of the womb with altered condition of the os and cervix. In answer to Dr. Silvester, he stated that the placental souffle was distinctly intermitting, but not pulsating in its character, and often varied from time to time: the mechanism of the uterine veins would fully account for it even after the detachment of the placenta.

Thanks having been voted to the author of the paper, the Society adjourned.

ADHESIONS OF THE EYELIDS TO THE GLOBE OF THE EYE.

M. **Petrequin** has succeeded in remedying this acquired deformity (which has hitherto been considered to be irremediable) in the following way. The principle of this method is to prevent the cicatrization of the opposed surfaces proceeding simultaneously, to have the healing process completed, or nearly so, on one surface before it has commenced on the other. In order to effect this object, he pierces the adhesion at a suitable depth with a needle carrying a double ligature. The ligature corresponding to the eyelid is rather loosely tied, so that it shall very slowly divide the parts it includes; but the second ligature, which corresponds to the eyeball, is, on the contrary, very firmly constructed, and rapidly cuts through the adhesion. In this way the wound on the sclerotic may be healed before there is any exposed surface on the eyelid with which it can unite, and the denser and more extensive the adhesion, the easier it is, by regulating the tightness of the ligature, to obtain an interval of several days between their separation. If the adhesion is very deep, it must be divided by several operations, penetrating to a greater depth each time. The eyeball must be kept fixed during the process by means of carefully applied compression, as otherwise its motion and that of the eyelid might cause inflammation, and premature separation of the ligature. — *M. Petrequin's Traité d'Anatomie Méd.-Chir.*; and *Brit. and For. Med. Rev.*

TREATMENT OF TYMPANITIS BY PUNCTURE.

In a case in which intestinal disorder was attended with tympanitic distension of the bowels, M. Levrat had recourse to paracentesis of the small intestine over the most salient point. The operation was performed with a trochar, of the size of a stocking-needle [apparently similar to Dr. Babington's], and gave immediate relief. Fifteen days afterwards, the patient was about his business. In a case of so-called gangrene of the lung, terminating by perforation of the diaphragm and peritonitis, which was attended by great tympanitic distension of the abdomen, the peritoneum was four times punctured, with considerable temporary relief.—*Journal des Connais. Méd.-Chirurg.*; *Dr. Bennett's Report, Brit. and For. Med. Rev.*

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Case of pleuro-pneumonia treated without venæsection. [Reported by Henry Smith, M.R.C.S. House-Surgeon.]

James Smith, ætat. 40, a night porter, of intemperate habits, but a strong hearty man, was seized on Thursday, Sept. 17th, with violent rigors and cough. He came to me the next day. His countenance indicated some severe disorder. He complained of great pain on the left side, and was unable to draw a deep inspiration. He had cough, and he had previously spat some blood; tongue much furred; skin hot; pulse rapid, without much power; respirations frequent. A perfect examination was not obtained by the stethoscope, as he had his clothes on, but some small crepitation was audible below the left mamma.

℞ Ant. Pot. Tart. gr. ¼, 3tis horis in haustu. Applicetur Emplast. Lyttæ, parti dolenti.

19th.—This day I saw him in bed: he is very ill. There are all the symptoms of intense pneumonia; pain in the side is severe; cough very troublesome; heat of surface great; respirations frequent; pulse 100; he expectorates a thick secretion slightly discoloured with blood. The left side of the chest posteriorly sounds dull on percussion; small crepitation is heard over the lower half, and loud bronchial breathing and bronchophony. Medicine has vomited him once.

Rept. haustus 2dis horis.
℞ Hyd Chlor. gr. ij. P. Opii, gr. ¼ ter die.

20th.—Has experienced a little relief, but the symptoms are very severe; cough is extremely troublesome; expectoration more viscid and more rusty; pain in the side very bad; skin very hot; respiration 26; pulse 80; morbid sounds heard with greater intensity.

℞ Ant. Pot. Tart. gr. j. 2dis horis. Syrup. Papaveris, ʒj. Rep. Pil.

21st.—The symptoms are still very urgent. He complains of great pain below the left mamma, causing him much restlessness and anxiety; on applying the stethoscope there, a loud dry to and fro sound is heard. The cough is not so troublesome; the expectoration is now so viscid that the spitting vessel may be turned upside down, the secretion adhering to the bottom; small crepitation more abundant *at the base of* the lung; bronchial breathing and bronchophony very distinct in the superior portion; respiration 24; pulse 98, soft and compressible.

Applicetur Empl. Lyttæ lateri. Rep. haustus 2dis horis, et Pil. sextis horis.

22d.—Has passed a very restless night, being attacked with severe fits of coughing and dyspnœa, which have made him apprehensive of death from suffocation. He feels somewhat better this morning; respiration 22; pulse 85, soft; morbid sounds heard with greater intensity; mouth not at all affected by mercury, nor is he purged; face is red; much anxiety indicated in it, dyspnœa is very severe at times, and the pain in the side is as severe as ever.

Omitte haustum.
℞ Hyd. Chloridi, gr. j.; Ant. Pot. Tart. gr. j; Pulveris Opii, gr. ¼ 2dis horis; Morph. Muriatis, gr. ½ nocte.

23d—This poor man is greatly relieved in every respect. His gums are affected by the mercury. He has had several hours rest, and feels much easier; the cough and dyspnoea are less; skin is cooler, tongue moister; there is less bronchial breathing audible, and crepitus is not so extensive. Expectoration less viscid, less rusty, rather frothy; respirations 22 in a minute; pulse 80, full and compressible; rubbing sound under the left mamma not audible. He feels stronger altogether; bowels open.

Repet. Pil. ter die. Beef-tea.
℞ Haustum ante prescriptum 4tis horis.

24th.—Is not so well as he was yesterday. I had forgotten to give him an opiate at night, and he did not sleep, and he had a recurrence of the suffocative fits of dyspnœa, but the evidences of the inflammation in the lung abating are greater. Respiration tranquil, below 20 in the minute. The expectoration is changed in its character; it is no longer viscid and rusty, but it is thin, frothy, and very abundant. Crepitation more moist and large, is heard more extensively, nearly all over the left lung behind, and the bronchial breathing is still distinct over the upper lobe, but there is less dulness on percussion altogether; the skin is still hot; pulse 88, sharper, and more irritable; tongue much furred, cough troublesome at times; mouth getting very sore.

℞ Pil. Hydrargyri, gr. iij.; Extract. Conii, gr. iv.; Pulv. Ipecac. gr. ij. ter die. Rep. Haustus, 2dis horis. Omitte pilulas ante prescriptas. To have an egg and arrowroot. Morph. Mur. gr. ½ nocte.

25th.—Has passed a very comfortable night; feels very easy; no distress of breathing; cough better, but troublesome at times; expectoration less in quantity, and clearer; respiration 19; pulse 88; mouth very sore.

Rep. Haustum, 4tis horis. Rep. Pil. et Morph. Mur. gr. ½ nocte.

26th.—Mercury has purged him, which has made him feel sick and low; chest symptoms much abated. The chief thing is the cough, which is troublesome at times. The bronchial tubes appear to be stuffed with secretion. Large crepitation, mingled with natural breathing, is heard over most of the affected lung. Bronchial breathing still audible in upper lobe. He has unfortunately an attack of rheumatic inflammation in the right hand. Pulse 100, rather feeble.

Omitte Pil. et Haustum. ℞ Ammon. Carb. gr. v.; Tinct. Opii, ♏iij.; Vin. Antimonii, ʒj.; Aquæ, ℥j. 4tis horis. Emplast. Lyttæ intra scapulas.

29th.—All symptoms of lung disease have gone, except a slight cough. He has been troubled with much purging, and his mouth is still uncomfortably sore. Breathing in left lung getting free: still considerable crepitus audible.

Oct. 6th.—Is now sitting up daily: an attack of rheumatic inflammation in the feet and hands has unfortunately protracted his recovery, but it has now subsided.

There is no peculiarity in this case as regards symptoms; and my only object in publishing it is to show that most acute pleuro-pneumonia may be cured without having recourse to bleeding: for we are taught by books, and by lectures, and also by what is daily seen in practice, that we are (particularly in this disorder) to bleed "coup sur coup." I was led to treat this case without bleeding chiefly in consequence of what I have noticed in inflammation of the lungs in children. Last year I had the care of several, who were attacked with acute chest disease, and I found that tartar emetic and the warm bath were sufficient for the case, whilst bloodletting, even by leeches, appeared to be of no use in the disease.

The tolerance of the tartar emetic was fortunately great in this case, for the doses were large, and frequently repeated. The patient was taking on an average ten grains daily until the symptoms subsided. The sudden amelioration of all the symptoms when the mouth was affected by the calomel is striking, and deserves notice, as there are many who affirm that mercury does no good in this disease; whilst, on the other hand, others (and amongst them I may mention the high authority of Dr. Watson) strenuously recommend it as our "sheet anchor."

Correspondence.

A SUBSTITUTE FOR POULTICES AND FOMENTATION CLOTHS.

Mr. A. Markwick, of Langham Place, has forwarded to us specimens of two newly invented substances, which he calls the "*Impermeable Spongio-Piline*," and the "*Impermeable Piline*." The former, a loosely felted fabric, composed of sponge and wool, and backed by a coating of India rubber, is intended for applying warm fluids to the surface of the body, and hence as a substitute for poultices and fomentation cloths, over which it possesses the following advantages:—1. Its fibro-spongy texture renders it a bad conductor of heat, and enables it to retain a considerable quantity of liquid, the temperature of which is maintained for several hours, owing to the India rubber backing preventing evaporation. 2. By merely acting as a vehicle for the fluid, without in any way combining with it, as is the case with linseed meal, it enables it to come in direct contact with the affected part. 3. It is free from any unpleasant smell or tendency to decomposition, two things inseparable from the ordinary poultices. 4. It is clean and light, and can be easily applied to, and readily retained on all parts, however painful or uneven. 5. In securing all the beneficial effects of heat and moisture without the necessity for frequent renewal. 6. In not becoming dry, harsh, or irritating. 7. In requiring merely to be saturated with hot water, or some medicated decoction, to be fit for immediate application, a very considerable saving of both time and trouble being by this means effected.

The "*Impermeable Piline*," also a loosely felted fabric, but formed only of wool, or of wool and some other fibrous substance combined, and backed by India rubber, will be found an admirable material in many chest affections, where either protection or counter-irritation is required; also in chronic diseases of the joints, &c. &c. and is well adapted for exciting both a local and a general diaphoresis; and hence will be an extremely useful adjunct to the "water cure," and likewise to the remedies resorted to for restoring animation in cases of drowning.

It may be had of different degrees of thickness and of various sizes, from that of the hand to that necessary for an entire envelope for the body.

*** The specimens appear to be very well made; but it must rest with the profession to determine how far they can be beneficially applied to the purposes intended.

Chemical Intelligence.

GUN-COTTON.—XYLOIDINE.

It is rather more than two months since we inserted a notice of a remarkable chemical discovery reported to have been made by Prof. Schönbein, of Basle*. We allude to the preparation of cotton so as to give it fulminating properties, and to render it a safe, inexpensive, and simple substitute for gunpowder. We then announced it as probable that the Professor would give a full account of his alleged discovery at the meeting of the British Association at Southampton. To the surprise and disappointment of all scientific men, this meeting was converted into an advertising medium for the so-called gun-cotton; and the Professor declined to give the least intimation respecting the preparation of the substance, as it was his intention to take out a patent for it, and thus render it a commercial speculation. After the noble example of Sir H. Davy, who declined to patent his safety-lamp, we should have thought scientific men would have hesitated before resorting to the patent laws for a pecuniary remuneration; and we certainly think that the British Association committed a grave error in allowing the subject to be brought publicly forward, when there was no intention, on the part of the alleged inventor, to describe the process by which the gun-cotton was prepared.

Within the last week, public attention has been much directed to the subject. It is reported that the German Diet has conditionally awarded 100,000 florins as a reward to the inventor. The *Athenæum* informs its readers that a hundred weight of the gun-cotton is now on its way from Basle to Woolwich, having been ordered by our Government with a view of testing its applicability to heavy ordnance.

In the meantime, although it does not appear that Professor Schönbein had divulged his secret, Dr. Otto, Professor of Chemistry in Brunswick, has addressed a letter to the *Hanoverian Gazette*—since published in the *Times*—in which he states that he was led, from the researches of Pelouze, to infer that the cotton was soaked in nitric acid of a certain strength, washed, and dried. Thus the secret of the gun-cotton became at once public. On the 4th of October, Dr. Otto performed certain experiments with his preparation, the results of which satisfied him that it must be identical with the gun-cotton of Schönbein. At a late meeting of the Academy of Sciences, in Paris, M. Arago gave an account of certain experiments performed with prepared cotton by a M. Morel, the results of which satisfactorily showed that it was capable of forming an admirable substitute for gunpowder; and, with all that enthusiasm which characterises our Gallic neighbours, M. Arago pictured an army entering on a campaign, with a few bales of cotton and a few gallons of nitric acid, making their own explosive cotton as they required it! M. Morel, it is stated, has secured a patent for France; and, so far as we can ascertain, he has acquired his knowledge of the subject independently of any communication from M. Schönbein. The latest intelligence is, that the last mentioned gentleman has procured a patent for England and her colonies.

Having thus given a slight history of what has transpired publicly on this subject, we now propose to consider how far M. Schönbein has a claim to be regarded as the inventor of gun-cotton, assuming that he employs nitric acid like Dr Otto and M. Morel.

About six or seven years since, it became pretty generally known to the chemists of England, from the researches of M. Pelouze, that when woody fibre, whether as paper, sawdust, or linen, was saturated with strong nitric acid, washed, and dried, its properties were considerably altered. A principle called *xyloidine* was produced; and the woody fibre, although all the acid was washed out of it, burnt rapidly, and often with explosive violence. We saw this experiment made about six years since; but, from that time, the subject appears to have received from chemists no particular notice, until the alleged invention of Schönbein recalled the attention of Dr. Otto and others to the researches of Pelouze.

In various chemical works published in 1842-3, the action of nitric acid on woody fibre is especially mentioned. Thus, in Turner's Chemistry (ed. 1843, p. 1222), it is stated, in reference to woody fibre, "In strong nitric acid sawdust dissolves; and, on the addition of water, a white insoluble powder is deposited, which contains nitric acid, and explodes when heated." In Graham's Chemistry (ed. 1842, p. 295), the facts are more explicitly stated, as the following extract will show:—"Nitric acid, in its highest state of concentration, exerts no violent action upon certain organic substances, such as lignin or woody fibre and starch, for a short time, but unites with them, and forms singular compounds. A proper acid for such experiments is procured with most certainty by distilling 100 parts of nitric acid with no more than 60 parts of the strongest oil of vitriol. [These are exactly the proportions recommended by Dr. Otto]. If paper is soaked for one minute in such an acid, and afterwards washed with water, it is found to shrivel up a little, and become nearly as tough as parchment, and, when dried, to be remarkably inflammable, catching fire at so low a temperature as 356°, and burning without any nitrous odour (Pelouze)."

---

* August 21, p. 351.

Professor Graham here, it will be seen, gives, in 1842, an outline of Pelouze's discovery, and, by the substitution of cotton for paper, it becomes the so-called discovery of another in 1846!

We shall now give an extract from the Traité de Chimie of M. Dumas. At page 12, tome vi. published in 1843, this author says:—"When cloth (either linen or cotton), or a sheet of paper, is soaked for a few minutes in nitric acid of a specific gravity of 1·4, and afterwards washed in water, the xyloidine formed at the expense of a part of the vegetable tissues remains locked up in the fibre, rendering the paper and the cloth impermeable to water, and much more combustible. These properties suggested to M. Pelouze the idea of employing them in the manufacture of cartridges for artillery[*]."

M. Schönbein may have known nothing of Pelouze's researches: nevertheless, it appears to us clear that Pelouze was the real and original inventor of the process for preparing gun-cotton. His countryman, M. Dumas, informs us that he even announced the plan of applying these substances to the very purpose for which M. Schönbein has taken out a patent.

With respect to the process for preparing this substance, we have found that the acid best adapted for the purpose is that recommended by Pelouze. It is obtained by distilling ten parts of dry nitre with six of sulphuric acid: and it is strictly speaking the acidum nitrico-nitrosum. The cotton wadding should be thoroughly steeped in this acid for about three minutes, then plunged into water, and washed under a current, until litmus paper is no longer reddened by the washings. The cotton should be well squeezed in a cloth—picked out and gently dried before a fire. It requires some time to dry a mass of it thoroughly; since the porous material is very retentive of water. When at all humid it burns slowly and without explosion. When dry it burns suddenly with a bright yellow flame, a feeble detonation, and leaves no residue. Compared with its bulk its explosive properties do not appear remarkable: but when compared with its weight they are greater than those of gunpowder. The explosion is less rapid than that of the fulminating compounds of the metals; but more rapid than that of gunpowder. When well prepared it explodes at a very moderate heat (about 420°), gives off scarcely any visible smoke, and leaves no residue. This substance has a great advantage over gunpowder in the fact that when well prepared the whole of it is dissipated in gas — carbonic acid and nitrogen. With gunpowder there is always a residue of carbon and sulphuret of potassium,—the latter tending to corrode the metal. Experiment only can determine the relative gas-producing powers of the two substances. The gun cotton may be inflamed over gunpowder without igniting it. There is nothing extraordinary in this: hydrogen may be inflamed in contact with gunpowder without kindling it, and a small quantity of alcohol may be burnt over it with a like negative result. Gunpowder requires a red heat for its ignition, and unless one particle of the mass reaches this temperature it does not explode. There can be no doubt that the gun cotton explodes at a much lower temperature than gunpowder, and as percussion will produce the same effect as heat, it should be cautiously handled when thoroughly dry[*].

It is altogether a remarkable substance; and may, upon trial, entirely supersede gunpowder. Should this be the case, it may have the effect of rendering nitric acid cheaper and more abundant, since the employment of nitre for the manufacture of gunpowder would be no longer necessary.

We have prepared this substance with the strongest nitric acid 1·52,—with the acid at 1·4, distilled as above stated, and with a mixture of nitric and sulphuric acids; but, according to our experiments, the most certain and satisfactory process is that above described. The cotton is undoubtedly highly oxygenized, and it may be worth inquiring, whether in a highly dried condition it may not be liable, in masses, to spontaneous combustion. It might be hazardous to keep a large store of it completely dried. The presence of a very small quantity of moisture is sufficient to counteract its explosive properties; and as cotton from its porousness is very hygrometric, it will be proper to consider how far this property may interfere with its employment as a substitute for gunpowder. If it be true, as it is reported, that the government have ordered a hundred weight of this substance from Basle, in Switzerland, the cost of transport will far outweigh the cost of the materials. This quantity might have been made at Woolwich under the superintendence of M. Schönbein, and rendered fit for use at a small expense in the course of a few hours.

In conclusion we shall observe that although we think the merit of the discovery is due to M. Pelouze, yet M. Schönbein deserves credit for having at least called public attention to the subject. He has, however, been the involuntary means of making the practical value of M. Pelouze's researches well known. His secret has transpired in spite of his attempt to conceal it. *Suum cuique.*

---

[*] Lorsqu'on trempe pendant quelques minutes un morceau de toile ou une feuille de papier dans l'acide azotique à 1·4 de densité, puis ensuite dans l'eau, la xyloïdine formée aux dépens d'une partie des membranes végétales, reste interposée et rend le papier et la toile impermeable à l'eau, et beaucoup plus combustibles, propriétés qui ont suggéré à M. Pelouze l'idée d'*appliquer ces enveloppes à la confection des gargousses pour l'artillerie.*

[*] In two experiments since made with a mercurial bath, gun-cotton exploded at 425°; but gunpowder did not explode until the thermometer rose to 545°.

INTERMENT IN TOWNS, AND DESECRATION OF THE DEAD.

We extract the following from the *Times*, as the facts tend to corroborate the remarks made on this subject in our last number.

Since the dreadful disclosures of Enon Chapel, down to the recent desecration of certain city churchyards, and the removal of cart-loads of human remains to the eastern end of the metropolis, nothing so humiliating, or in detail so revolting, has occurred to equal in horrors the proceedings which are now going on in the pauper burial-ground attached to the St. Giles's workhouse. It appears that in this parish it has been found necessary to enlarge the workhouse, and to add an infirmary, a dispensary, a casual ward, waiting rooms, bath rooms, and other buildings for the accommodation of the inmates, who for many years had suffered much; that in order to effect these objects, a number of temporary offices, covering in the whole a piece of ground at the rear of the building containing about half an acre, have been removed, and the whole area, extending from the back of the workhouse to a lane called "Short's Gardens," laid bare. The plot of ground thus exposed is surrounded on all sides by the dwellings of the poor, who inhabit this locality in perhaps greater numbers than any other part of the metropolis. Many of these miserable tenements overlook the spot, and so dense is the population that several thousand poor families reside within the circle of 100 yards round it. After the materials of the old buildings had been removed, the workmen in the employment of the builder, Mr. Holland, of Duke Street, Bloomsbury, commenced digging the foundations for the new buildings, and while so engaged found at the depth of about four feet from the surface some bones, which were carted away with the rubbish, and deposited in the vicinity of Battle Bridge. As soon as the circumstance of finding the bones was represented to the Clerk of the Works, he immediately waited upon the governor of the workhouse, and also some members of the board of guardians, but no directions were given to cease disturbing the remains. The workmen, therefore, continued to prosecute their labours, when it soon became apparent that the ground was filled with coffins and the decomposed bodies of human beings. A sight of this appalling character had such an effect upon the workmen employed to clear away the revolting substances, that some of them exhibited the greatest reluctance to interfere, and only complied at length from the fear of losing their employment.

While the task of exhuming the remains was proceeded with, the Board of Guardians held two or three meetings, and, after some deliberation and inspection of the ground, came to the determination to exhume all the bodies, and have them removed to the St. Giles's Cemetery, St. Pancras Road. These instructions are now in the course of being complied with, and it is calculated that within the last fortnight the remains of 1,200 persons have been removed. The coffins appear to have been wedged together, and in many cases 14 have been found in one grave. A space of ground, measuring about 90 square feet, has been already excavated, with the intention of removing all the coffins that may be found. The earth is found to be in some parts hard and gravelly, but towards Short's Gardens it becomes loose and damp, and in those parts the progress of decomposition has been more rapid and complete. To the north, and to within a very few feet of the workhouse itself, the soil is comparatively firm, and here a most appalling sight was presented. Owing, it is supposed, to the peculiar properties of the soil in this place, the coffins were found to be in a better state of preservation, and to have resisted, to a greater extent, the mouldering effects of time. They could not, however, be removed in any thing like a perfect shape, and parted asunder when exposed to the action of the air. The bodies they contained were found to be still solid; the hair upon the eyebrows and eyelashes clearly discernible, and every feature entire and perfect as when first deposited. The flesh, however, had turned into a white substance, resembling to the touch, and not unlike in appearance, the common mushroom or toadstool (adipocere). The coffins containing these bodies were found at depths varying from 4 to 9 or 10 feet. In some instances the mouldering flesh clung to the head round about the jaw, and round the scalps, while the teeth remained white and firm. The brain could also be traced, and in some cases even the viscera were clearly distinguished. These bodies appeared to have been swathed in coarse linen shrouds, as several fragments of the latter were found. The accumulation of those ghastly remains in a few hours became so great that coffins or other large boxes, hastily put together and formed of three-quarter inch deal, painted black, were got in readiness, into which the remains of about 30 persons were packed indiscriminately, and forwarded a hearse to the cemetery of St. Pancras ad. The remains of about 1,200 persons re thus removed; a much greater number, vever, still remain, and at this moment loathsome place is strewn with skulls, ny of them in the state described, bones ll kinds, and fragments of broken coffins. e pit excavated has already yielded the ains of about 1,200 persons, including skeletons of many children; and judging m present appearances, the workmen emyed have not more than half finished—if much—their frightful task. Portions of eral coffins, with fragments of their stly occupants, can now be traced within or 14 inches of the surface, while in er places the piles of coffins have been npressed by time, according as the wood ted, and now appear lying close to each er, as if some external pressure had been ployed. Some of the able-bodied paupers m the workhouses were employed collect the fragments. It is evident, from the earance of some of the coffins, that the upants did not in every case belong to humbler classes, as some of them have ces of cloth attached to them, and are hly studded with nails, and contain the rks of having been once decorated with tes. The dates, however, are, unfortutely, erased by time, with the exception of ew. In one portion of the ground the rkmen found as many as 30 or 40 skeles, all thrown indiscriminately together; ne of them bore the appearance of having n recently deposited. Several copper ins, pipes, and other things, were also nd. The coins were very much corled, but one of them is in sufficiently od preservation to exhibit the date in ible characters. Independently of the trage upon decency and proper feeling ich is involved in these proceedings, it is be apprehended that very fearful results the sanitary condition of so densely owded a neighbourhood will follow the ening of the loathsome pit now exposed view. The indignation of the people in immediate distinct has been audibly pressed. A great majority of them beg to the sister country, and with that pect for the dead for which they are nationly characterized, they have viewed the proedings with feelings of indignation. It is lculated that an immense number of coffins d their contents have still to be removed.

HE FEVER IN AND NEAR NOTTINGHAM.

EVER still prevails in this town, and at d and New Lenton and Radford, to an rming state, and we regret to learn that new cases are of a more malignant chaeter than those reported previously. uring the *seven days the cases admitted to the General Hospital have been* numerous; the applications for admission have so fast increased, that the weekly board determined, on their meeting on Tuesday, to appropriate the two distinct wards on the ground floor, (these wards being apart from the wards occupied by the rest of the patients) for 21 fever cases, and already the beds are all occupied. From Wednesday, the 30th ult., to Wednesday last, there have been admitted into the General Hospital, from New and Old Lenton, 3; from the country, 1; from Radford, 4; and from Nottingham, 13! The out-patients, during the same period of time, have been, from Lenton, 6; Radford, 8; the country, 2; and Nottingham, 22. On Tuesday last, there were admitted into the Hospital, 2 from Lenton, 3 from Radford, and 1 from Nottingham. On Wednesday, 2 from Lenton, 1 from the country, and 6 from Nottingham. The number of in-patients admitted up to Wednesday evening last, from the commencement of the epidemic, was as follows:—Lenton (Old and New), 51; from the country, 8; Radford, 38; Nottingham, 27; total 124. The out-patients, during the same period, have been from Lenton, 67; Radford, 70; the country, 5; Nottingham, 82; total, 224. Within the seven days, the total number of in-patients, 21, and of out-patients, 38. The grand total of fever patients *in* and *out* upon the Hospital books appears to be 348!

A correspondent informs us that there have been admitted since, 29 in-patients, 98 out patients. Total of fever cases, 151 in-patients, 332 out-patients. Grand total, 483.

LEPROSY IN CHINA.

IT is reported that leprosy is exceedingly common among the Chinese, and that it is very prevalent at Canton. Leper hospitals now exist there as they did in England up to the end of the 15th century. It is said, however, that they are over-crowded with patients; and, as there is a great horror of the disease, many are turned out, and allowed to die on the highways and in ditches. The entire absence of cleanliness among the lower class of Chinese will sufficiently account for the prevalence of this and other diseases of the skin among them.

ALLEGED POISONING BY THE VAPOUR OF PHOSPHORUS.

ACCORDING to M. Dupasquier, the effects of the vapour of phosphorus among workmen employed in the manufacture of lucifer matches have been much exaggerated. He has remarked that these persons were subject only to slight attacks of bronchitis. The more serious symptoms recorded by some observers, were, he considers, due to the improper admixture of arsenic with the phosphorus paste.

TREATMENT OF ACUTE MANIA.

M. Brierre de Boismont has come to the following conclusions respecting the treatment of acute insanity.

1. All the forms of acute insanity, especially of mania, admit of cure in a period of one or two weeks.

2. The treatment should consist in the application of tepid baths (from 82° to 86°), for a period of ten or twelve hours at a time, gradually increased to fifteen or eighteen hours duration.

3. The patient should be, at the same time, sprinkled with cold water, and, unless he is quite tranquil, this should be continued during the whole of the period that he is in the bath.

4. When eight or ten such baths have been taken without manifest improvement, the treatment may be suspended and afterwards resumed.

5. Of all forms of insanity, this treatment is most effectual in cases of acute mania,—then in simple acute delirium, delirium tremens, puerperal mania, and acute melancholia.

6. Chronic mania has been benefited, but not cured, by this form of treatment.—*Journal de Médecine*, October 1846.

ANTIDOTAL TREATMENT OF LEAD COLIC.

MM. Sandras and Bouchardat, considering that mineral poisons are absorbed and deposited principally in the liver, to be afterwards eliminated through the alimentary canal, recommend that what they consider a universal antidote, persulphuret of iron, should be administered in such quantities as to be always in excess in the intestinal tube, and thus prevent the reabsorption of the poisonous matter deposited there by the branches of the vena portæ. M. Sandras first administers a purgative, and orders a soap bath. The patient then swallows, night and morning, a teaspoonful of a mixture of syrup and persulphuret of iron. M. Sandras has found that large quantities of this compound may be taken without mischief, and its use may be persisted in for a long period. He employs at the same time opium, strychnia, and belladonna.

In two years, this physician has thus treated 122 cases of lead colic in different stages. Two only proved fatal: the rest were cured with great rapidity. Only two relapses occurred in cases in which the individuals had not again exposed themselves to the vapours of lead.—*Ibid.*

MEDICAL COURT-MARTIAL.

A kind of medical court-martial has been lately held at the hospital of Val de Grâce, under the presidency of Colonel François, to try a surgical pupil of the hospital on a charge of having caused the death of a patient by giving him an overdose of opium.

The deceased, a military patient, was admitted into the hospital for ophthalmia, and the physician prescribed for him a sudorific syrup: but it so happened, that the first dose which was given to him contained about *an ounce of the tincture of opium!* (thirty grammes.) The man swallowed it, and died in three quarters of an hour, violently convulsed. The minister of war ordered an investigation of the circumstances.

M. Fretin, the accused, was interrogated on the allegation of his having labelled a bottle, containing tincture of opium, "sudorific syrup;" but he denied that he had made any mistake, and contended that he was not responsible for the result. The accused was defended by counsel, and the court, after hearing the defence, acquitted him of the charge.—*Journal de Medecine*, Oct. 1846.

*** The case is chiefly remarkable from the fact that it is perhaps the most rapid instance of poisoning by opium on record.

REMEDY FOR TOOTHACHE.

M. Cottereau recommends, for the alleviation of toothache, an ethereal solution of camphor, containing ammonia. Sulphuric ether is saturated in the cold with camphor, and two or three drops of solution of ammonia are added. In this way an ammoniacal camphorated ether is obtained, which should be kept in a well-stopped bottle. This liquid acts as a cautery to carious teeth, and it immediately relieves toothache. M. Cottereau states that he has employed it for four years, and its application has always been attended with success. The rapid evaporation of the ether causes a slight deposit of camphor in the dental cavity, and thus protects the nerve from the air. The ammonia has a cauterizing action.

EMPLOYMENT OF TANNATE OF IRON (INK) IN THE TREATMENT OF CHLOROSIS.

M. Benedetti considers that the tannate of iron (ink) is one of the best remedies in the treatment of chlorosis. The dose may be from about eight to thirty grains daily; and the patient commonly recovers in from twelve to twenty-five days.

The tannate of iron employed by him is prepared by dissolving iron filings in dilute sulphuric acid, precipitating by carbonate of soda, so as to obtain a pure carbonate of iron. Forty-four parts of this carbonate, in a state of dry powder, are to be added to nine parts of pure tannic acid, dissolved in boiling water. The mixture is stirred and evaporated until the tannate is obtained as a dark, insipid, uncrystalline compound. It may be given suspended in syrup, or in the form of pills.—*Gaz. Méd.* Oct. 10.

H MEDICAL STUDENTS.

ast issued from the University
has been ordered that, after
Iovember, 1846, all medical
l undergo an examination at
h of the three years of study.
ar, on physics, chemistry, and
ry; in the second year, on
physiology; and in the third
ology. There will be three
d four students at each exami-
xaminations will take place
15th of July and the 1st of
any student who fails to
aminers, cannot again present
he following November. Un-
asses, his ticket for the ensuing
withdrawn. If again rejected
, he must resume his studies
Gaz. Méd. Oct. 10.

are severe, but they embody
method of testing the know-
didate than the mere forms of
which are gone through in this
all kinds of subjects, at one
our's duration.

KNESS AT ALGIERS.

to the *Gazette Médicale*, the
Algiers are at present over-
the sick. Numbers of patients
ler fever are daily rejected from
pital. Notwithstanding the
the medical officers, numerous
ithout assistance.

SES IN SEA WATER.

ates that sea water holds only
gaseous matter as river water,
e quantity varies according to
the day. Thus he found in
the ocean the following pro-

	Morning.	Evening.
cid . .	3·4	2·9
. . . .	5·4	6·
. . . .	11·	11·6
	19·8	20·5

MISE WITH HOMŒOPATHY.

ANT, who has recently taken up
practice, has been nominated
the Hospital of Saint Andrew,
It is reported that the Board
im this appointment ordered
neral rule to treat his patients
medical principles; but they
rangely permitted him to treat,
cally, those diseases which are
to be *incurable* on consultation,
ical practitioners.—*Gaz. Méd.*
1.

HARVEIAN MEDICAL SOCIETY,

57, Harley Street, Cavendish Square.

The following gentlemen have been elected officers of this society for the current session:—

Presidents. — Thomas Hodgkin, M.D.; Alexander Anderson, Esq. M.A.

Honorary Secretary. — Charles John Hare, M.D.

Treasurer.—William Stroud, M.D.

Council.—J. H. Bennet, M.D.; William Camps, M.D.; John Charles Langmore, Esq.

THE GERMAN HOSPITAL.

The anniversary of the opening of this institution was celebrated on the 15th instant. It is a peculiarity of the German Hospital, that the patients are attended by physicians who speak their own language, and understand their habits. A Protestant chaplain has been appointed, on account of the majority of patients being Protestants; but Catholic priests have full liberty of attending upon those of their own persuasion. The nurses of the institution are young German women, trained in the duties of attending the sick at a Protestant institution on the Rhine, and receiving little or no emolument for their offices. The number of patients admitted to the hospital, the Sanatorium (an edifice built for those who can pay a small sum for accommodation), and the different dispensaries, has been 1,180 in the course of the year just terminated. They are admitted at all hours of the day and night, simply on application, and without any letters of recommendation being required.

OBITUARY.

DR. JOHN THOMSON.

It is with much regret we announce the death of Dr. John Thomson, late Professor of General Pathology in the University of Edinburgh, which occurred on the 11th inst.

As a practitioner successively of the two departments of medicine, surgery and physic, in each of which he may be said to have acquired the highest confidence of his professional brethren and the public, Dr. Thomson was particularly distinguished by the acuteness and promptness of his discrimination—by the rapidity with which he detected the actual position of his patient, and traced the phenomena of disease which presented themselves, to those inward changes in the economy, on which they depended. Many of his professional brethren, who had occasion to consult him in cases of difficulty and doubt, have been known to say that the rapidity with which the mental processes of diagnosis and prognosis were carried on by him, seemed to participate largely of intuision, had a powerful influence in stimulating the enthusiasm and energy of his pupils.

At an early period of his life Dr. Thomson had given considerable attention to Botany and Chemistry. He edited a translation of Fourcroy's Chemistry, with notes, and he is well known as the author of various works on medical science.

For the last ten years of his life he had withdrawn himself from practice, but still devoted himself to intellectual pursuits. He was born in Paisley, on the 15th March, 1765, and was therefore at his death, in his 82nd year.

DR. BEXILL.

On the 16th inst., in Woburn Square, in the 69th year of his age, after 12 years of suffering from stricture of the œsophagus, William Bexill, Esq. M.D. formerly of the Island of Barbadoes.

DR. PAYEN.

Lately, in France, Doctor Payen, Chief-Surgeon of the Port of Toulon.

DR. GAUBRIE.

At Bordeaux, M. le Docteur Gaubrie.

DR. BERARD.

Recently, in Paris, Dr. Auguste Bérard, Professor of Clinical Surgery in the Faculty of Medicine at Paris.

LIFE OF HARVEY.

having entered his 80th year, he died; and the fellows of the College, who had already, in 1652, placed his statue in their Hall, accompanied his body far beyond the city walls on the way to its grave at Hempstead, in Essex.—*From Mr. Paget's Records of Harvey.*

Medical Statistics.

STATISTICS OF THE VENEREAL DISEASE.

We extract the following from a valuable and interesting paper by Mr. W. Acton, lately read before the Medical and Chirurgical Society[*]:—

Army Returns.—The army reports extend over a period of seven years and a quarter, and enter into the detail of the various venereal affections (8072 in number) of the soldiers, amounting to the aggregate strength of 44,611, quartered in the United Kingdom.

Cases admitted into Hospital in Seven Years and a Quarter in the United Kingdom.

Venereal affections:—

Syphilis primitiva	1,415
Syphilis consecutiva	335
Ulcus penis non syphiliticum	2,144
Bubo simplex	844
Cachexia syphilitica	4
Gonorrhœa	2,449
Hernia humoralis	714
Strictura urethræ	100
Phymosis et paraphymosis	27
Total	8,072
Annual ratio per 1000 men	181
Total aggregate strength for whole period	44,611

The numbers, then, that we have to deal with are very large; and it may reasonably be supposed that our conclusions cannot be much invalidated by any peculiar circumstance in treatment, discipline, or climate. The surgeon is at once struck with the large proportion of venereal affections occurring among our troops. On reference to the table, it will be seen that nearly one man in every five, or, more correctly, 181 per 1000, is attacked with the complaint. If we push our inquiries further, we see venereal diseases occurring most commonly under the forms of *ulcus penis non syphiliticum, gonorrhœa,* and *syphilis primitiva*; and it follows, according to this arrangement of sores, that one man out of thirty-one is attacked with true syphilis, one in twenty with ulcus penis non syphiliticum, and one in eighteen with gonorrhœa.

It would have been very desirable, had the army medical authorities shewn on what diagnostic sign they base their distinction of ulcus non syphiliticum and syphilis primitiva. Modern investigations prove that we possess no means of diagnosing such sores other than inoculation; and it may be fairly supposed that this test was not resorted to. It becomes, therefore, a question for them to decide, if in future any importance should be placed on these distinctions, and whether it might not be as well to class all sores on the genitals together, and call them primary ulcers. If we do this, we find primary ulcers on the penis more numerous than discharges from the urethra, the numbers being 3559 primary ulcers, 2449 cases of gonorrhœa; or about on man in twelve suffers from ulcer on the penis, one in eighteen from gonorrhœa. If we wish to learn the proportion which secondary bear to primary symptoms, we find the numbers vary considerably as we take the army classification of sores, or the one I propose.

According to the army returns, nearly one in every fourth soldier who has primary symptoms is attacked with secondary disease; but, if we class all sores on the penis together, we find the proportion nearly one in eleven, which is about the average in civil life, as I have shewn in my work on venereal disease. The propriety of my proposed classification is thus seen; for we can hardly believe that in the army the surgeon, who sees his patient early, confines him in the hospital as long as he thinks fit, and takes every possible precaution, which the civil practitioner is unable to do, can meet with such frequent relapses; but, if he does, we can no longer believe that the plan in the army is fraught with the advantages some have supposed, if one in every four men treated in the ranks is a victim to secondary symptoms; and either the classification or treatment must become modified, or the army medical department cannot maintain its character for treating syphilis.

Swelled testicle in the army appears to be a very common affection. It follows, from the return, that one in every three men attacked with gonorrhœa labours under swelled testicle—a proportion we are, happily, far from observing in civil life. Some may explain this by soldiers taking violent remedies unknown to their surgeons, and prescribed by their comrades; others to the more numerous cases among our cavalry; but its frequency, as compared with civil practice, deserves the attention of the regimental surgeon.

Stricture, as a sequela of gonorrhœa, is met with in a proportion equally remarkable; one in twenty-four men who suffer from gonorrhœa becomes subject in the army to this complaint. It may happen that the same individual comes on the sick list several times a year, and hence the proportions; but, if this be admitted, the numbers are very large, and shew the liability of stricture to return, as asserted by some authors.

---

[*] Communicated by the Author.

Annual Rate of Mortality by Registered Cases of Syphilis.

Age.	Population, 1841.	Deaths in half-year of 1845	One death by syphilis annually to persons living.	Number and age of mothers whose children were born in Sweden.
0 and under 1	46,664	30	778	—
15 ,, 25	385,386	5	38,539	79,225
25 ,, 35	360,998	11	16,409	248,589
35 ,, 45	252,819	3	42,137	148,610
45 ,, 55	163,527	2	40,882	7,189
55 ,, 65	92,883	1	46,442	—
			All ages . .	483,613

No correction has been made for increase of population, as all the cases of syphilis are probably not returned under that name.

Syphilis most frequent at the age (25—35) at which the greatest number of conceptions take place.

Out of the large population of adults in the metropolis, only twenty-two deaths occurred from syphilis in six months; in fact, so rare an occurrence is death from venereal disease, that few surgeons, however large their practice in this department, have seen more than two or three instances. Some years ago I witnessed one fatal case, from phagedænic ulceration of the throat, in a male reduced by disease and dissipation, and lately I was asked to see a female who died from marasmus and exhaustion, having lately recovered from general rupia, and the post-mortem only revealed a few tubercles in the lungs. This female was not a prostitute, but was said to have contracted the disease at the time she was seduced. The slight mortality among adults is further corroborated by the army returns. We find only two deaths occurring in seven years and a quarter, out of 8072 men attacked with venereal disease: one of these was caused by phagedæna, the other by cachexia syphilitica. In Wilde's excellent work "On the Medical Institutions of Austria," we find seven deaths reported as having taken place in Vienna; five the result of bubo, probably the result of sloughing; one from sore throat; and one from general secondary symptoms. Of these, three were males, and four females. The foregoing statements are opposed to the belief that syphilis causes consumption, particularly when we know scrofula often favours the most serious cases of syphilis. Authors on phthisis have not remarked that a large proportion of their patients have had syphilis. In the list of female adults, consumption is stated in the above table as the immediate cause of death *only twice;* and acute disease of the *respiratory organs* proved fatal in the same proportion. I would call attention, in the above instances, to the immunity of fatal cases depending on disease of the bones; only one instance occurred, and that on board the *Dreadnought,* doubtless in an individual who had been long absent from England, and neglected himself. Phagedæna is likewise on the decline; it proved fatal to only two males. No allusion is made to sloughing phagedæna in females—a disease formerly so frequently met with in the low and dissipated parts of London, such as Swan-alley and St. Giles's. Sir A. Cooper mentions, in his lectures, having seen seven cases in one day in a ward in St. Giles's Workhouse, five of which proved fatal.

Before I conclude, I would wish to answer an objection which I have frequently heard urged against the conclusions I have arrived at. It is supposed that females do not perish directly from syphilis, but linger on under other complaints, and die in large numbers in our asylums and workhouses. Those who advance this opinion admit—now that the fact is established by statistics—that prostitutes do not die from syphilis; and the assumption is perfectly gratuitous that these unfortunate women die in such institutions. I have visited most of these houses, and conversed with the medical officers, who are not cognizant of these supposed cases. Among others, Dr. Pidduck, Physician to the London Female Mission, who has had opportunities of seeing large numbers of this class of females for several years, writes to me that he has not observed the young females who come under his care subject to any complaint other than those to which female servants in private families are liable. I have dwelt on this subject, because Parent-Duchatelet has not alluded to it in his work. This is one of the blanks in his valuable statistics which a premature death prevented that able philanthropist from filling up.

STATISTICS OF APOPLEXY AND HEMIPLEGIA.

The following interesting table represents an analysis of 215 cases of apoplexy and hemiplegia in decennial periods, compared with the respective numbers of the population at those ages. The population is assumed to be 20,000, of whom one-half are considered to have attained the age of twenty years; and the numbers living in each decennial period will be nearly those assigned in the third column of the table.

Age.	Cases.	Population at this age.	Proportion of cases in 1000 persons.
20—30	16	3000	5·3
30—40	30	2500	12·0
40—50	40	1800	22·2
50—60	41	1300	31·5
60—70	54	1000	54·0
70—80	30	500	60·0
Above 80	4	200	

The figures in the second column represent the *relative proportion* of cases in each successive decade, and this is compared with the numbers living of the same age.

Out of 814 deaths from apoplexy in the Registrar General's report (1843), registered in the year 1842 in the metropolitan district, 61 occurred under 20 years of age. The remaining 753 deaths took place in the following decimal periods:—

Age.	Deaths from Apoplexy.
20 to 30	24
30 to 40	67
40 to 50	113
50 to 60	171
60 to 70	185
70 to 80	152
above 80	38

It will be seen from both of these tables that there is a progressive increase of cases with increase of age; and that the greatest number of deaths from apoplexy occur between the ages of sixty and seventy.—*Dr. Burrows on Disorders of the Cerebral Circulation.*

DEATHS FROM PHTHISIS COMPARED WITH THE TOTAL DEATHS IN VARIOUS COUNTRIES.

The following interesting table has been drawn up by Professor Casper of Berlin, in order to show that in various cities and countries the relative mortality from phthisis is very uniform. The observations, which comprise 60,801 cases, extend for the most part over the last twenty years.

Places.	Years.	Deaths from phthisis.	Total deaths.	Rate of mortality from phthisis.
Berlin	1830—39	12,800	73,216	1 : 5·7
Paris	1816—19	15,375	85,339	1 : 5·5
London	1840—41	14,562	91,565	1 : 6·2
Hamburg	1823—25	2,360	10,963	1 : 4·6
Stuttgart	1828—37	924	4,356	1 : 4·7
New York	1816—26	7,466		1 : 5·0
Philadelphia	1820—26	3,590		1 : 7·7
Baltimore	1819—26	2,243		1 : 6·7
Boston	1820—26	1,481		1 : 5·9
Total deaths . .	. . . .	60,801	Average .	1 : 5·8

From this table it will be perceived, that, however widely scattered the populations, this formidable disease is the cause of about *one-sixth* of all the deaths! The mortality from plague, cholera, and other transient epidemics, sinks into nothing compared with the devastation caused by phthisis. The number of persons yearly cut off by consumption in England and Wales is upwards of 59,000; and in the metropolis alone the yearly deaths exceed 7000. According to the last report of the Registrar-General the total deaths in England in 1842 were 349,519; those from phthisis 59,291. The deaths from phthisis were therefore to *the total deaths as 1 : 6·4; i. e. 15·6 per cent.!*

SCIATICA.

Dr. Fioravante was led to employ blisters to the heels in the treatment of sciatica, from hearing of several empirical cures performed by a woman, who applied an irritant (ranunculus sceleratus) to the same parts. The epidermis was softened, and then removed, till the blisters would produce their ordinary effects. The suppuration thus established was kept up for some time in chronic cases. Twelve cases are mentioned, which were speedily cured by this means.

A memoir was published, about ten years ago, by Dr. Petrini, of Aquila, a town of the Abruzzi, to make known a method of treating sciatica by the application of the actual cautery between the litle toe and the next one of the affected timb. Quadri, of Naples, has obtained great success by adopting the same treatment, and states that a Capuchin monk, affected with sciatica, used to carry about with him a cauterizing iron.—*Annali Universali di Med.*; and *Brit. and For. Med. Rev.*

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Oct.* 15th.—Francis Paul Forge, Driffield, Yorkshire.—Joseph Seymour Metford, 4, Park Place, Clifton.—Rob. Shackleford Cross, Petersfield, Hampshire.—Jas. Kelly, Liverpool.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 10.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	589	Males....	452	Males....	493
Females .	589	Females .	453	Females .	475
	1178		905		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population*, in 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	97
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	171
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	171
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	210
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	256
Total	905

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	905	1000	968
SPECIFIED CAUSES	903	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	189		
2. Dropsy, Cancer, &c. of uncertain seat	93	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	130	151	157
4. Lungs, and other Organs of Respiration	276	313	294
5. Heart and Blood-vessels	34	29	27
6. Stomach, Liver, and other Organs of Digestion	86	70	72
7. Diseases of the Kidneys, &c...	9	8	7
Childbirth, Diseases of the Uterus, &c.	14	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c.........	7	6	6
10. Skin, Cellular Tissue, &c.	1	2	2
11. Old Age	32	66	67
12. Violence, Privation, Cold, and *Intemperance*	32	27	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	4	Convulsions	33
Measles	8		
Scarlatina	28	Bronchitis	48
Hooping-cough ..	25	Pneumonia	54
Diarrhœa........	57	Phthisis	152
Cholera..........	2	Dis. of Lungs, &c.	6
Typhus	41		
		Teething	12
Dropsy..........	12	Dis. Stomach, &c.	5
Sudden deaths ..	2	Dis. of Liver, &c.	13
Hydrocephalus ..	25	Childbirth	19
Apoplexy	18	Dis. of Uterus, &c.	1
Paralysis	20		

REMARKS.—The total number of deaths was 95 below the autumnal and 63 below the annual average. As a remarkable coincidence it will be observed, that in this week the births were precisely equal in the sexes, and the deaths differed only by a unit on the female side. In all the districts, the mortality was below the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·38
„ „ Thermometer[a].......... 56·4
Self-registering do.[b] ......max. 79· min. 44·3
„ in the Thames water „ 0· „ 56·2

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·85: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 7·5° above the mean of the month (48·9°). The extreme hebdomadal range in the self-registering thermometer was 38·7°.

NOTICES TO CORRESPONDENTS.

Dr. Coley's paper on Cholera will appear in the following number. We shall be glad to receive the other papers referred to by Dr. C.

Dr. T. Chambers's case of Diabetes is unavoidably postponed until next week.

Mr. W. Bowman.—The case shall have early insertion, and a proof will be sent.

Mr. G. Harvey, Castle Hedingham.—We shall be glad to publish the case.

We will look at the advertisements referred to by Dr. G. Robinson.

Inquiry shall immediately be made on the subject referred to by the Manchester Pathological Society.

"Non-Contagion."—We shall very shortly have to insert a notice of the work.

Mr. R. H. Meade.—The case shall be inserted.

Received.—Dr. Orpen.—Mr. W. Highmore.—Dr. Camps.—Mr. T. Alcock.—Mr. W. Brown, Callington.—A Subscriber.

Just published, price 3s. 6d.

HOMŒOPATHY viewed in connection with MEDICAL REFORM. By HENRY R. MADDEN, M.D.

J. Leath, Publisher, 5, St. Paul's Churchyard.

UNIVERSITY COLLEGE, LONDON.—Presentation of an Address and Testimonial to Dr. Taylor.—A General Meeting of the Students of the Faculty of Medicine favourable to the above objects, will be held in the theatre of Materia Medica on Wednesday, the 28th inst., at 4 P.M. to receive a report of the committee and the address.

H. BURFORD NORMAN,
Hon. Sec. to the Committee.

3, Duchess Street, Portland Place,
Oct. 20th, 1846.

AL, SURGICAL, AND SCIENTIFIC WORKS.

HR'S HANDBOOK of HUMAN ANATOMY. Translated of English Students. By J. Birkett, F.R.C.S. 16mo. [*Next week.*

II.

N COLEY'S PRACTICAL TREATISE on the DISEASES . 14s.

III.

URROWS On DISORDERS of the CEREBRAL CIRCU- ith coloured Plates, 10s. 6d.

IV.

MEROD'S CLINICAL COLLECTIONS and OBSERVA- . 8vo. 10s. 6d.

V.

SDAILE On MESMERISM in INDIA, and its Practical and Medicine. Fcp. 8vo. 6s. 6d.

VI

KES'S REMARKS on the DYSENTERY and HEPATITIS

VII

SSON'S (late of Windsor) NOTES and RECOLLECTIONS L LIFE. Edited by the Author's Son. 8vo. 7s. 6d.

VIII.

HAM'S LECTURES on Subjects connected with CLINICAL ing Diseases of the Heart. Vol. II. 12mo. 8s. [*On Wednesday next.*

IX.

AS THOMSON'S EXPERIMENTAL RESEARCHES on LS: with Remarks on the Food of Man. Fcp. 8vo. 5s.

X.

GHES'S CLINICAL INTRODUCTION to the Practice of Fcp. 8vo. 6s.

XI.

IN TEALE'S TREATISE on ABDOMINAL HERNIA. ustrations, 15s.

XII.

EIRA'S ELEMENTS of MATERIA MEDICA. A New ised. [*In the press.*

XIII.

VEN'S LECTURES on the COMPARATIVE ANATOMY the VERTEBRATE ANIMALS. 8vo. [*In the press.*

XIV.

On the HUMAN BRAIN: its Structure and Diseases. [*In the press.*

XV.

ODIE'S LECTURES illustrative of various Subjects in 8vo. 12s.

XVI.

MOORE On the USE of the BODY in relation to the Mind.

XVII.

LEMENTS of PHYSICS. Translated, with Notes, by 8vo. with Woodcuts, 21s.

1, Ponderable Bodies, 7s. 6d.; Part 2, Imponderable Bodies, 2 vols. 13s. 6d.

XVIII.

LDT'S COSMOS. Translated, with the Author's sanction ieut.-Col. E. Sabine, F.R.S. Vol. I. Post 8vo. 12s.

ON: Longman, *Brown*, Green, and Longmans.

NEW VOLUME OF DR. LATHAM'S LECTURES.

On Wednesday next will be published,
Vol. II. 12mo. 8s cloth,

LECTURES on Subjects connected with CLINICAL MEDICINE, comprising Diseases of the Heart. By P. M. LATHAM, M.D. Physician-Extraordinary to the Queen; and late Physician to St. Bartholomew's Hospital. In 2 vols. Vol. II.

, The work complete in 2 vols 12mo. 16s.

Longman, Brown, Green, and Longmans.

DR. GEORGE MOORE'S WORKS.

Just published, post 8vo. price 9s. cloth,

THE USE OF THE BODY in relation to the Mind. By GEORGE MOORE, M.D. M.R.C.P.L &c.

“No author has more ably traced the connection between the mind and the body, or has more finely and conclusively established the relation between man and his Creator.” BRITANNIA

By the same Author, [illegible] Edition, post 8vo. 7s. 6d.

THE POWER OF THE SOUL over the BODY

“The two volumes ought to find a place beside each other in every [illegible] in the kingdom.”
ATLAS.

Longman, Brown, Green, and Longmans.

MR. TEALE'S TREATISE ON HERNIA.

Just published, 8vo. with numerous
Illustrations, price 15s.

A PRACTICAL TREATISE on ABDOMINAL HERNIA. By THOMAS PRIDGIN TEALE, [illegible] F.R.C.S. and Surgeon to the Leeds General Infirmary.

“The book is such as we at once pronounce unexceptionable [illegible] and fulfilling to the utmost the st[illegible] [illegible] publication. Students and [illegible] will find it an invaluable [illegible].”
BRIT. AND FOR. MED. REVIEW.

Longman, Brown, Green, and Longmans.

[illegible]

A PRACTICAL TREATISE on INFLAMMATION, ULCERATION, and INDURATION of the NECK of the UTERUS; with Remarks on [illegible] Prolapsus Uteri a[illegible] symptoms of th[illegible] Disease. By J. HENRY BENNET, M.D. [illegible] Accoucheur to the Western Dispensary [illegible] Physician to the Hospitals [illegible] and La Salpêtrière, Paris.

“Dr. Henry Bennet's work has, we think, very ably supplied a [illegible] part of medicine …… We do not hesitate to say that Dr. Henry Bennet has treated of these subjects more clearly and faithfully than any author we are acquainted with, and we have read his treatise with much real satisfaction.”
MEDICO-CHIRURGICAL REVIEW.

London: John Churchill, Princes Street, Soho.

NEW WORK ON THE FOOD OF ANIMALS AND THE FATTENING OF CATTLE.

Just published, in 1 vol. fcp. 8vo. price 5s. cloth,

EXPERIMENTAL RESEARCHES on the FOOD of ANIMALS and the FATTENING of CATTLE: with Remarks on the Food of Man. By ROBERT DUNDAS THOMSON, M.D. of the University of Glasgow.

“The question of the origin of the fat of animals appears to be completely resolved by these beautiful and elaborate experiments.”
Baron Liebig.

Longman, Brown, Green, and Longmans.

Just published, illustrated with Engravings on Wood, post 8vo. 10s. 6d. cloth,

CHEMISTRY of the FOUR SEASONS; Spring, Summer, Autumn, Winter. By THOMAS GRIFFITHS, Professor of Chemistry in the Medical College of St. Bartholomew's Hospital.

John Churchill, Princes Street, Soho.

LONSDALE ON FRACTURES.

In 8vo. with Sixty Woodcuts, price 16s.

A PRACTICAL TREATISE on FRACTURES; explaining the Causes, Symptoms, and various Modes of Treatment. By EDWARD F. LONSDALE, Fellow of the Royal College of Surgeons, Assistant-Surgeon to the Royal Orthopædic Hospital.

By the same Author, price 3s. with Lithographic Drawings and Woodcuts,

A DESCRIPTION of THREE INSTRUMENTS for Fractures of the Lower Jaw, Fractures of the Patella, and for tying Uterine Polypi.

London: John Churchill, Princes Street, Soho.

Just published, Second Edition, post 8vo. 8s. 6d. cloth,

ON URINARY DEPOSITS; their Diagnosis, Pathology, and Therapeutical Indications. With Forty-six Illustrations on Wood. By GOLDING BIRD, M.D. F.R.S., Assistant Physician to Guy's Hospital.

London: John Churchill, Princes Street, Soho.

Just published, fcp. 8vo. 12s. 6d. cloth,

A MANUAL of CHEMISTRY: with numerous Illustrations on Wood. By G. FOWNES, Ph.D. F.R.S. Professor of Practical Chemistry in London University College.

“An admirable exposition of the present state of chemical science, simply and clearly written, and displaying a thorough practical knowledge of its details, as well as a profound acquaintance with its principles. The illustrations and the whole getting of the book merit our highest praise.”
BRITISH AND FOR. MEDICAL REVIEW.

London: John Churchill, Princes Street, Soho.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of [illegible] Hyde Park Square, in the County of Middlesex, Bookseller.
Friday Oct 23. [illegible]

—VOL. XXXVIII.
SERIES, No. 79.]

PRICE {UNSTAMPED, 8d. STAMPED....9d.

LONDON
EDICAL GAZETTE,
OR
Journal of Practical Medicine.

7} g.}

OCTOBER 30, 1846.

{Also in Monthly Parts.

LECTURES.

Page
ctures, delivered at St. George's al, by Cæsar Hawkins, Esq. Sur- the Hospital 735
of the Ovarium 735
roscopic Characters of the Bile. Gorup-Besanez 742

INAL COMMUNICATIONS.

n of Facts illustrative of the Conditions of the Pulmonary as bearing upon the Treatment iac and Pulmonary Diseases. By n Chevers, M.D. With Engrav- Part V. 744
l Narrowing of the Pulmonary e 744
etes Mellitus: with Observations. mas Chambers, M.D. late Physi- the Chelsea Dispensary 751
s on the Diseases of Children. es Milman Coley, M.D. Licentiate Royal College of Physicians, and n to the Western Dispensary .. 752
.... 752
ructive Inflammation of the Eye, hlebitis consequent on Amputa- with Remarks. By W. Bowman, ssistant-Surgeon to the King's and Royal London Ophthalmic ls 754
racters of the Blood as it exists in ous periods of Utero-Gestation. liam Camps, M.D. Physician to ringdon General Dispensary.... 758

LEADING ARTICLES.

t of Unqualified Persons to the f House-Surgeon in Infirmaries . 760
nt of Medical Officers to Benefit s............................. 761

REVIEWS.

ves of the Uterus. By Thomas eck............................ 763
ysiology applied in the Treatment tional Derangement and Organic : with Observations upon Hah- 's Practice. By John Leeson, oner of Medicine, &c. *Part I...* 767

PROCEEDINGS OF SOCIETIES.

Pag
Medical Society of London.—Mr. Hird on a Case of Rupture of the Bladder from external Violence...................... 770
Pathological Society of London.—Address of the President, Dr. C. J. B. Williams.... 771
Stricture of the Œsophagus.............. 774
Fracture of the Neck of the Femur (?) 774
Post-pharyngeal Abscess 774
Rupture of the Heart from Muscular Exertion 774

CORRESPONDENCE.

Case of Rupture of the Tendon of the Rectus Femoris. By William Highmore, Esq. of Sherborne 775
The Degraded State of the Medical Profession —Medical Officers to Benefit Societies.. 776
A New Pelvimeter (with Engraving)........ 776

MEDICAL INTELLIGENCE.

Cheltenham General Hospital and Dispensary 750
Manchester Medical Society 759

SELECTIONS FROM JOURNALS, ETC.

Influence of Position upon the Inguinal and Femoral Rings 742
Recovery from a severe Injury to the Gravid Uterus.................................. 744
Injections of Quassia to remove Intestinal Worms................................. 774
Structure of Hepatic Cells 757
Hygiene of Persons predisposed to Chronic Disease, and particularly to Phthisis Pulmonalis. By M. Fourcault 769
On the Presence of Copper and Arsenic in all Ores of Iron 763
On the Character of the Blood in Malignant Affections of the Uterus 777
Description of the Itch Constitution. By Dr. Siebert............................... 778

WEEKLY TABLES, ETC.

Births and Deaths in the Metropolis........ 778
Meteorological Summary.................. 779
Notices to Correspondents 779

[*For* ADVERTISEMENTS, see next page.

NEW WORKS ON SCIENCE AND MEDICINE.

Just published, in 8vo. cloth, price 18s., with upwards of 100 plain and coloured Engravings,

VOGEL'S PATHOLOGICAL ANATOMY of the HUMAN BODY. Translated and edited, with the Author's sanction, by Dr. DAY.

Just published, Part I. price 5s.

Professor GRAHAM'S ELEMENTS of CHEMISTRY. New Edition, entirely revised, and greatly enlarged.

18mo. cloth, price 1s.; free by post, 1s. 4d.

The STARS and the EARTH; or, Thoughts upon Space, Time, and Eternity.

8vo. cloth, price 3s.

CHEMISTRY and PHYSICS in relation to PHYSIOLOGY and PATHOLOGY. By BARON JUSTUS LIEBIG.

London: H. Baillière, Publisher, 219, Regent Street.

Third Edition, almost wholly re-written,

LIEBIG'S ANIMAL CHEMISTRY. Part 1 (the first half of the Work), 8vo. 6s. 6d. is now ready.

Taylor and Walton, 28, Upper Gower Street.

MEDICAL TEXT BOOKS.

QUAIN'S ANATOMY. 5th Edition, by Dr. SHARPEY and Mr. QUAIN. Part 1, 18s.; Part 2, 14s.

*** Part III., completing the work, is nearly ready.

ELLIS'S DEMONSTRATIONS of ANATOMY. Crown 8vo. 12s.

MULLER'S PHYSIOLOGY. By Dr. BALY. 2 vols. 8vo. each 20s.

BALLARD and GARROD'S MATERIA MEDICA. 8vo. 12s.

MURPHY on NATURAL and DIFFICULT PARTURITION. 8vo. 9s.

MORTON'S SURGICAL ANATOMY. Royal 8vo.:—

PERINÆUM. 6s., or 7s. 6d. coloured.

GROIN, &c. 9s. or 13s.

HERNIA, &c. 9s. or 12s.

PLATES of HEAD and NECK, &c. 7s. 6d., or 13s. coloured.

Taylor and Walton, 28, Upper Gower Street.

Next week will be published,

LIEBIG'S QUESTION to MULDER tested by Morality and Science. By Dr. J. G. MULDER, Professor of Chemistry in the University of Utrecht. Translated by Dr. P. F. H. FROMBERG. With an Introduction, by JAMES F. W. JOHNSTON, M.A. F.R.SS. L. & E. F.G.S.

William Blackwood and Sons, 45, George Street, Edinburgh, and 37, Paternoster Row, London.

MEDICAL APPRENTICE.—There is a VACANCY for an APPRENTICE in the Sussex County Hospital, Brighton.—For particulars apply to Mr. Edward Kent Parson, the House-Surgeon. The Hospital contains 100 patients and upwards, and is a recognised school of *practical* medicine and surgery.

DR. LATHAM ON DISEASES OF THE HEART.

Published This Day, Vol. II. 12mo. 8s. cloth,

LECTURES on Subjects connected with CLINICAL MEDICINE, comprising Diseases of the Heart. By P. M. LATHAM, M.D. Physician-Extraordinary to the Queen; and late Physician to St. Bartholomew's Hospital. In 2 vols. Vol. II.

*** The work complete in 2 vols. 12mo. 16s.

Longman, Brown, Green, and Longmans.

LONDON HOMŒOPATHIC HOSPITAL (founded by the English Homœopathic Association), No. 17, Hanover Square.

PRESIDENT.

The Right Hon. Lord Robert Grosvenor, M.P.

Wanted, a RESIDENT MEDICAL OFFICER for the above Institution. The Salary to be £75 per annum, with apartments. Testimonials of qualification (together with the Candidate's Diploma or Certificate as a Member or Licentiate of a British Medical College or Corporation) to be forwarded to the Hon. Secretary of the Association, 17, Hanover Square.

By Order of the Committee,
R. W. HEURTLEY, Hon. Sec.

MEDICAL.—Wanted, by a Physician and Surgeon, 34 years of age, a respectable PARTNERSHIP with an elderly West End practitioner. None but principals will be attended to, and the highest references will be expected and given.—Address, with full particulars, to M. D., Mr. Bousefield's Library, Thayer Street, Manchester Square.

ROBINSON ON THE TEETH.

Just published, with 139 Engravings, price 10s

THE SURGICAL, MECHANICAL, and MEDICAL TREATMENT of the TEETH; including a complete Treatise on Dental Mechanism. By JAMES ROBINSON, Surgeon-Dentist to the Metropolitan Hospital, &c. &c.

W. Webster, 60, Piccadilly, London; Lindsay and Blakiston, Philadelphia, U.S.

Just published, price 2s. 6d.

HOMŒOPATHY viewed in connection with MEDICAL REFORM. By HENRY R. MADDEN, M.D.

J. Leath, Publisher, 5, St. Paul's Churchyard.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES, offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Saltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton: by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the public against spurious articles.

Lectures.

SUBSTANCE OF A CLINICAL LECTURE

ON EXCISION OF THE OVARIUM,*

Delivered at St. George's Hospital, September 23d,

By Cæsar Hawkins, Esq.
Surgeon to the Hospital.

The subject of excision of the ovarium has excited so much interest of late, and so much has been said and done with regard to it, that a few observations on the operation you saw yesterday may be not without their use (which I could not make to you after it had been done, owing to the present state of our operating theatre), particularly as I do not know that any of you have ever seen the operation performed before; at any rate it has not been done here, and I believe it has only been performed three times previously in the London hospitals, and unfortunately all these terminated fatally.

It has been insinuated, indeed, that the surgeons of hospitals have been improperly backward in sanctioning the operation;—certainly they have not thrust themselves forward, but I doubt whether this has not arisen from their being but too well acquainted with the difficulties and dangers which must attend it, and which have been much underrated by some of those who have been most enthusiastic in its praise as a general cure for ovarian tumors. If, however, the hospital-surgeons have been tardy in adopting the operation as an established one in surgery, it shews at least the groundlessness of another charge, which is often brought against them—I mean the wantonly inflicting pain for the sake of display.

For my own part, I remain very nearly of the same opinion now that I was twenty years ago, when Mr. Lizars first published his cases of this operation, with regard to the removal of these great tumors in an entire state by incisions of not less than twelve or fifteen inches long, and often much more, or from the ensiform cartilage to the pubes—operations which I look upon as almost invariably unjustifiable. But as soon as ever Mr. Jeaffreson published his account of the great improvement he had proposed and practised, of lessening the bulk of the tumors by drawing off the greater part of the fluid contents, so as to allow the tumor to be removed by an incision of moderate size (which I think was in the latter part of 1836, or in the beginning of the following year), I have always spoken favourably of the principle of the operation in my lectures; and since its propriety had been still further tested by a few cases in the following years, I have occasionally offered to perform it in what I believed to be proper cases. In two of these I know that the operation was performed by another gentleman, and the patients both recovered from it, as I hope I may be allowed to think they would have done if I had performed the operation myself; for I really cannot see any reason, as has also been insinuated, why those who are in the constant habit of performing a variety of operations, should be less competent to conduct both the preliminary and the after-treatment, than those whose experience has been more limited, if not confined to this particular operation. One of these cases presented itself three or four years ago; the other patient, I have since learned from Dr. Page, had previously made up her mind to have it done by Dr. Bird, and only came to the hospital, about two years ago, for further opinions upon its propriety.

With regard to the nature of ovarian tumors generally (which it is not my present intention to dwell upon), no one, I think, who has been long at a hospital can fail to be satisfied that the opinion now most generally entertained is better founded than the older notion of the disease; and that they are not the comparatively innocent tumors which they were supposed to be, inconvenient indeed, but not much calculated to shorten life. It has been said by several who have investigated the subject, that the average duration of life after the tumors have shewn themselves is not above five or six years, much of which is passed in a state of great suffering and distress; and I am inclined to think it may not be a very erroneous estimate, which makes them therefore a highly dangerous complaint, and this especially after they have once required the operation of tapping; for Dr. Lever, who has collected the result of 100 cases, says that the average life after tapping was less than two years and a half; nor do I think this calculation also likely to be very wrong. Doubtless, also, many of the most indolent cases of supposed ovarian tumors were really instances of other disease, especially of fibrous tumor of the uterus, which is often slow in its progress, and, as many improper operations shew, is easily mistaken for ovarian disease. A tumor which was sent to the hospital as ovarian, was found to be a fibrous tumor with cysts, and weighed as much as 56 lbs.; and in a case which I tapped lately, I drew off as much as fifteen pints of fluid, while much solid matter and other cysts remained behind. The tumor

---

* This lecture was given some time ago, but it has not been published till the lapse of several weeks has shewn the result, *which is the first instance of success in a London hospital.*

987.—XXXVIII. Oct. 30, 1846.

was found to be a fibrous one, its attachment to the uterus being by a narrow pedicle. By allowing for these, then, the average of real ovarian disease becomes still shorter, and the tumor consequently more fatal to life. The distinction between the two diseases is obscure; and you have very recently seen an instance of what I believe to be fibrous tumor, which has been about three months under treatment, and has become indolent and stationary: this tumor is supposed, however, by one gentleman who has seen much of these cases, to be an ovarian tumor.

But although this mortality in ovarian disease, and the insufficiency of any known means to do more than retard its progress, justify, in my mind, the excision of the tumor *sometimes*, do not for a moment be led away by enthusiastic encomiums to suppose that it can ever become general, or can ever be lightly undertaken. An operation in which the death of the patient has even taken place in an hour and a half, and often in less than twenty-four hours, while the disease, left to itself, would most probably not be fatal for five years, is not one which can be hastily determined on. Certainly never without a full knowledge by the patient herself of all the facts of the case; still less is she to be misled or over-persuaded into the having it performed. Now this very patient of ours was impressed with the idea—I know not from whom acquired—that tapping was a very dangerous operation, of which a great many died, and that she ought to have the tumor removed, actually believing that this operation was less dangerous than tapping! I need not say, that I thought it my duty to explain to her a little more accurately the comparative dangers of the two modes of procedure, before performing the excision of the tumor.

Attempts have been made to test the propriety of the operation by a collection of all the known cases of the operation; and such tables have been drawn up by Mr. Phillips, my former pupil and friend Dr. Jeaffreson, by Dr. Churchill and others; the latest, I believe, is that given by Mr. Lee, and published in part by Mr. South in the last number of his translation of Chelius's Surgery; and most instructive these tables certainly are, as to the difficulties and dangers of the operation.

Taking this table of Mr. South's (in which there are, however, many mistakes), it would appear that the operation has been attempted not less than 108 times, and that of these, 69 have recovered and 39 have died; so that the deaths actually produced by the operation have been more than one-third of the whole number,—a fearful mortality, arising from the recklessness with which it has been done in great measure, and perhaps less than the real truth, for it is currently reported that several fatal cases have not been published, though it is the bounden duty of all, when such a question is at stake, to contribute as far as they can to its elucidation, but more especially is it the duty of those who have contributed to the encouragement of others to perform it.

But we learn further, that of these 108 cases *attempted*, the operation was only *completed* in 84, and left *incomplete* in 24; and it is curious that the mortality was less in those in whom the operation could not be finished after it was begun, than in those in whom it was completed; of the 84 completed cases, 31 having died, and 53 recovered, being two-fifths fatal; while of the 24 unfinished cases, 8 died and 16 recovered, being exactly one-third fatal.

What a striking lesson do we learn from this statement, of the haste with which many have acted, when it appears that an error of diagnosis took place in 24 of these cases—actually in two cases for every seven in which the operation could be performed at all, whether rightly or wrongly! and it appears that in at least five cases no tumor at all existed,—in others the tumor was of the liver or intestines,—in several it was a fibrous tumor of the uterus, and the uterus itself has been taken out in two or three instances instead of an ovarian tumor; with what result you may imagine.

But then this statement includes *all kinds* of operation, while I said just now that I could only feel favourable to Mr. Jeaffreson's plan of emptying the fluid contents of the tumor, so that a moderate sized incision may suffice; and the two plans must be contrasted with one another, to give a fair estimate of the operation.

Mr. Lee tells us, that of the 108 cases a large incision was made in 79 cases, a small one in 23, and an opening of unknown length in six.

Of the 79 large incisions, 45 cases recovered and 34 died, being about three deaths to four recoveries; that is, three-fourths were fatal.

Of the 23 small incisions, 19 recovered and 4 died, being only one death to five recoveries; so that only one-sixth were fatal.

And of the 6 other cases of unknown length of incision, only one died.

Mr. Phillips's table is not very dissimilar to this in some respects, though it differs from it in others. Of the whole number, 82, collected by him, 33 died and 49 recovered, so that the deaths were altogether about two-fifths of the cases operated on, as in Mr. Lee's table. He divides these 82 into 55 long incisions and 27 short ones; and tells us that of the 65 long incisions, 26 died and 29 recovered, the deaths being nearly equal to the recoveries at this earlier part of the history of the operation. Of the 27 smaller incisions only 7 died, while 20 recovered, being nearly one death to four recoveries; a greater mortality than Mr. Lee's table, which rejects four of these from among the smaller incisions, of which four three you will observe were fatal. I will not say which is most accurate, but they both agree in the much less danger of the smaller operation; as, however, the whole number is less than those of the greater operation, we do not yet possess sufficient data to feel assured of the ultimate result of this mode of operation.

But further, you must remember that *recovery* from this operation is not necessarily a *cure*, owing to the difficulty of diagnosis which I have before alluded to, and still more to the impossibility of ascertaining with certainty, even with a correct diagnosis of the nature of the tumor, whether there are or are not such adhesions as to make the operation more hazardous, or oblige it to be desisted from after it has been begun. Mr. Lee's table does not shew this exactly; but Mr. Phillips gives us only 36 cures for 33 deaths; so that the cures are not much more than the deaths, and considerably less than half the operations. Taking the greater operations the result is still less flattering, as there are in 55 operations only 23 cures to 26 deaths, with 6 recoveries without a cure. Of the 27 smaller operations, which I before mentioned, 13 were cured and 7 died, leaving 7 other recoveries without cure, all of whom, I need hardly say, have incurred great hazard of their lives.

On the whole, then, you have ample proof that the cases proper for this operation are not very numerous; nevertheless I think there are some in which the minor operation may be performed with justice to our patients, and of this number appeared the present case.

I will not go so far as to say that the tumor is never to be extracted entire, but I think there are few indeed, in which it is right to operate at all, in which the bulk of the tumor may not be lessened by tapping, and the risk, therefore, as we have seen by the tables, be thereby much lessened. I do not know whether it may not be found hereafter that a few cases of solid tumor may be removed, and, perhaps, in precisely those circumstances now looked on as less proper for its performance. For instance, a small tumor may be complicated with ascites, which is regarded as an unfavourable complication, because peritonitis may be more likely to follow the excision; but, then, on the other hand, a tumor which has already caused this irritation in the peritoneal cavity, when of small size, is less likely to be slow and indolent *in its future progress, and the* chance of an earlier death from the disease itself may justify a greater amount of risk in attempting a permanent cure. And the same reasoning will apply to a tumor which is increasing more rapidly than usual, and has, therefore, induced some emaciation and failure of health while still of moderate dimensions.. Recovery after operation may be less probable in these circumstances than when the health is unimpaired; but, on the other hand, we know that these circumstances indicate a comparatively early fatal result, if nothing is done for the patient. It is fortunate, however, that, on the whole, the more solid tumors, when free from any malignant structures, are much slower than the single or larger cysts in their growth.

Let me next read you the account of our patient. "Emma Wilcox, 27 years of age, a servant, and unmarried, who was admitted by Dr. Nairne, on Sept. 2d, with ovarian dropsy. Abdomen much distended, measuring 40 inches round at the umbilicus; contents of tumor very fluid, no solid matter felt; occasional slight pain in the right iliac region; breathing interfered with in the recumbent posture; some difficulty in passing water; catamenia regular; health good; umbilicus not prominent. She first noticed the tumor, which was said to be hard, painful, and about the size of the palm of the hand, in the right iliac region, about three or four years ago: it remained nearly of the same size till eight months ago, when it increased rapidly, extending over the whole abdomen, and having its present soft fluctuating feel. She has been under treatment, but has never been tapped."

I was asked to see her a day or two afterwards, and the case seemed peculiarly favourable for excision, of which she had the not very accurate idea, which I have already mentioned, but which she still chose to submit to, when fully and fairly explained to her. She was young, and apparently in good health. The tumor appeared to be a single cyst, without any mixture of solid matter: there was evidently no fluid in the peritoneum, for you could easily hear the sound of the air in the colon on each side in whatever position she was placed. There was no evidence of any inflammation in former times making the existence of adhesions probable; there was no malposition of the uterus, as if it was adherent to or very closely connected with this organ, and yet the size of the tumor was so great, and the effect of pressure already so considerable, that tapping must be had recourse to before long. I determined, therefore, on excision, with the concurrence of those of my colleagues who saw her, and only waited till the irritation of the next monthly period was over, and a few days allowed for the increased vascularity of the parts during that time to subside. Our notes say, that the catamenia appeared on the 5th, out of usual time, but only lasted one day: on the 8th this function again took place, and continued till the 17th, a longer time than usual, shewing some irritation of these organs, and I fixed the 22d for the operation.

It is generally advisable before any operation to give a purgative once or twice to get the blood into a healthy condition, and obviate any irritation; and particularly so in such an operation as this, that the intestinal tube may be flaccid enough not to protrude much at the time, nor contribute to any disposition to peritonitis by its peristaltic movements. A dose of blue pill and colocynth was therefore given on the 17th, and I meant to repeat it on the 20th, and to let her abstain from meat for two days, as she was rather stout. On the 19th, however, I found her very feverish, and with pain and tenderness in the right iliac region, and I gave her three grains of calomel, with six of Dover's powder, and a little castor oil, with saline mixture. I may observe, that you cannot make a greater mistake than to bleed and reduce a patient much before any great operation: it is ill borne, and the reparative processes are ill performed when this is done, and you are left without resource if inflammation takes place, the chance of which is actually increased by depletion to any extent. This woman was acted on more than I desired by the medicine, and her tongue was a little loaded on the 21st: as, however, pain was only slightly felt in another part of the abdomen, I thought it better not to postpone the operation, which would thus dwell longer on her mind, and on the morning of the 22d an injection was given, and she was desired to empty the bladder just before she came upstairs for the operation.

A good deal has been said by Mr. Lizars, who first removed an ovarian tumor in this country, and by others who have succeeded him, on the necessity of a high temperature in the room, not only during the operation, but for several days afterwards, and much unnecessary importance is attached, I think, to this circumstance. You saw, indeed, that I had a fire in the room, the thermometer shewing about 74 degrees of heat, and I shut the windows when the patient was coming in. Doubtless, it is very right in operations on the cavity of the peritoneum, with exposure of the viscera, not to have too great a difference between the temperature of the air and of the body. It is no new principle, however, in surgery. You never see us operate for hernia on a winter's night in a cold theatre, but in the ward, and this has been my practice as long as I can remember. It is well, too, in this particular operation to have the room capable of being made tolerably warm for the next twenty-four hours, for fear you should be obliged to open the wound again, as has been required in consequence of hæmorrhage, and of protrusion of bowel through the wound. But to have the room like an oven for several days seems quite absurd, and likely to cause hæmorrhage and syncope: even at 80 degrees and upwards the air is still above 20 degrees colder than the peritoneum, and a few degrees less will do no harm, and I believe yourselves, as well as the patient and operator, found 74 quite enough; indeed, I was obliged to open a window for her benefit before she was taken to bed. To keep up a great heat, as a part of the subsequent treatment, for several days, which has been much insisted on, appears to be going back to the days before Sydenham, of scarlet clothes and hot rooms for small-pox. Let the temperature be agreeable to the patient, and proportioned to the collapse or excitement of pulse present, and it will be more likely to be useful to her welfare: even last night the patient was faint from the room being too close, though a high temperature was purposely avoided.

The position in which you saw the patient placed was at first half sitting at the end of the bed, with her feet on the ground, which is more convenient for the proper vessels than lying down during the evacuation of the fluid. When this was nearly completed, she was lowered to a nearly horizontal position to obviate faintness, and also because protrusion of the intestines was by this means made less likely to take place, and the removal of the sac from its attachments in the pelvis rendered much easier. You saw, however, how easily the bowels, in the flaccid state to which they had been reduced, were prevented from ever passing out of the wound. I will next read the account which has been written of the operation, and then make a few remarks on each step in the proceeding.

"The patient having been placed on her back, with her shoulders supported by a bed-chair, an incision, about three inches in length, was made in the median line of the abdomen, commencing a little below the umbilicus, and extending downwards towards the pubes. The linea alba was opened to the extent of about an inch; the peritoneum was exposed, and cautiously divided on a director: scarcely any hæmorrhage occurred in this part of the operation. The cyst was then seen through the incision; it was very vascular, but had contracted no adhesions to the surrounding parts. The incision of the tendon and peritoneum was then prolonged by a probe-pointed bistoury on the finger so as to expose the cyst for about three inches altogether. It was punctured with a trocar, and 17½ pints of very clear limpid fluid drawn off, of sp. gr. 1·006, and only very slightly clouded on addition of acid. As the cyst collapsed on the evacuation of the fluid, it became protruded through the incision, and was seen to be developed in the folds of the broad ligament with the left ovary on its surface close to the pedicle: it was thin, and did not contain any solid matter. A needle, carrying a double ligature, was passed through the pedicle, and the two portions tied separately; a ligature was then placed round the whole circumference of the pedicle in the same situation as the others, and the tumor was cut off beyond the ligature. No bleeding took place.

"At the early part of the operation the patient was faint, and required a small quantity of brandy and water, (one teaspoonful of brandy was all that was given). She remained, however, quite sensible during the whole time, and complained at times of pain in the back. The edges of the incision were brought together by four sutures and adhesive strapping, and a broad-tailed bandage, which had been placed under her before the operation."

I will next make a few observations on the successive stages of the operation, which is thus described in the note-book by Mr. Johnson.

The most convenient place for the first incision appears to be about half way between the umbilicus and the pubes, and, as the patient was fat, I made it about three inches long, down to the linea alba; but less would be sufficient for a thinner person. How any man in his senses could think of at once opening the abdomen with a long incision, I cannot imagine; but it is not at any rate likely to be done again, after the numerous mistakes which I have alluded to. Each step ought to be carefully performed, so as to incur as little hazard as possible, if it is found that the operations cannot be completed. I then opened the linea alba for about an inch, exposing the peritoneum, and it appeared so very vascular and thick over the tumor that I thought for a few seconds that a portion of omentum was situated over it, and of course adherent to it. I found, however, by moving it that the gentle pressure made at the sides of the abdomen had folded the peritoneum on itself, making several folds in thickness; and, on drawing them apart, the membrane had its usual appearance, and I divided it with the knife and director to the same extent as the tendon, exposing the cyst. The finger introduced into the opening ascertained that as far as it would reach all round the small opening there was *no adhesion whatever, and I therefore divided the wound downwards by a probe-pointed bistoury on the* finger, the cyst in which numerous and very large vessels were seen being exposed for about the same extent as the aperture made in the parietes. The non-existence of adhesions in the front of the tumor, or their easily yielding to the finger, does not necessarily prove that the back part may not be firmly adherent, but it renders it less likely to be found; and, on the other hand, if firm adhesions are found in this part of the operation, it can be desisted from at once, and very little pain is likely to follow an incision which does not open the cavity of the abdomen beyond the adhesions. I then passed a common trocar into the sac to evacuate the fluid, and, as it flowed, I passed a gum catheter through it that the bottom of the sac might be perfectly emptied, and that when laid on her back, if required, the fluid might be more readily conveyed into the vessels; but, as the fluid came away more slowly through it, I slipped the canula in again, and withdrew the catheter, which was, in fact, unnecessary for the purposes I had in view. I had a pronged forceps at hand, which has often been employed to hold the tumor before it has been opened, to prevent its receding, but I did not use it, for you saw that, as some of the fluid was withdrawn, the cyst began to pass through the wound; then somewhat more rapidly, so that I held it with my hands to restrain its exit in some measure till all the two gallons of water had escaped: at the end of which time all the sac was on the outside of the abdomen, and I scarcely pulled on it at all to reach the broad substance which attached it to the uterus, and, pressure being made on the abdomen, very little faintness attended the tapping, nor any vomiting, which has been sometimes found very troublesome by its effects on the intestines at the wound.

Many dangerous and fatal effects have resulted from the next stage of the operation, the severing the large blood-vessels in the pedicle. Separating its parts, a needle, carrying a strong double silk, was passed through the thinnest part, and each half of the pedicle tied tightly, in doing which the silk has often given way. Then, as the notes said, another silk was tied round the whole of the pedicle, which I recommend you always to do, when you tie a large nævus, or any vascular tumor, in two or more portions, if the form of the base admits of it, as it gives greater security against insufficient pressure of any vessel in the centre, and against the slipping of the pedicle within the silks. Do not be tempted either in an operation of this kind, or where you cut off a thick portion of omentum, in a case of hernia, to cut off the part you are going to remove, in order to tie the bleeding vessels separately as on a stump; you may depend on it you would sometimes have fatal hæmorrhage from this mode of proceeding; some vessel easily escaping observation, when the patient is faint and low, and bleeding afterwards into the peritoneum. I have witnessed it more than once in hernia, and it is still more likely in this operation.

Having, then, tied the pedicle securely, I cut off the sac with the probe-pointed knife, and carefully examined the large surface, in which vessels of considerable diameter were seen, and found that when I had sponged out the blood remaining in them, not a drop more escaped. I left, as you saw, a part of some size to slough off with the ligatures, because fatal hæmorrhage has taken place by cutting the pedicle too close to the ligatures, allowing the centre to slip through it, and loosen the pressure on the whole. I have seen the same thing with hæmorrhoids and nævi, and it easily happens when the base is large, and the traction great on the surrounding parts. This part of the operation seems to be generally the most painful of all, as might be expected, the pain being referred to the source of the spermatic nerves in the loins.

I left all the six large silks, which were thus attached to the pedicle, when it was allowed to recede into the abdomen, instead of cutting any of them off near the knot, for the same reason that I leave both ends n tying a vessel for aneurism; namely, to eave a considerable opening through which the pus and sloughy substance of the pedicle might easily escape, which are otherwise liable to be confined, when the ligatures in the orifice are only half the size of the knots within.

In dressing all wounds of the abdominal parietes you must use sutures tolerably close to one another, and they must include the muscle or tendon, as well as the integuments, in order to prevent subsequent hernial protusion of the intestine. The bowel has been found on the outside of the wound on a subsequent day in this particular operation, and there is in the museum below a preparation which shows the necessity of this caution, a small stab by a stiletto having been followed by a fatal hernia some years afterwards between the muscles and the integuments through the small aperture left by the wound. You see in this circumstance also, another reason why the incision made in the operation should not be larger than is sufficient to let the tumor readily escape, since subsequent hernia through the cicatrix may be more easily occasioned by a large wound.

It is unnecessary to say more than that the plasters employed went half round the abdomen for security, but were narrow at the wound, to allow fluid to escape, and that pressure was continued by the bandage to prevent fainting and distension by flatus before the muscular tone was recovered.

Since the operation our patient has gone on perfectly well: pain in the back was at first a good deal complained of, and 20 drops of laudanum were given in half an ounce of peppermint water, twice within the first three hours. There was also some collapse, requiring hot bottles to the feet, but at 4½ P.M. the pain was less, the pulse 84, and restored to its former strength, and the feet and body were again warm.

At 9½ P.M. the notes say that she complains of rather more pain across the lower part of the abdomen in the region of the bladder; the pulse is also higher, 99: the catheter was introduced, and about 8 ounces of water drawn off: soon afterwards she fell asleep, and when seen at 10½ P.M. she was quite easy, the pulse 84, and she appeared still inclined to sleep. At 2½ this morning the pulse again rose to 92, with pain and tenderness in the abdomen, but it went down to 86 soon after the water was again drawn off; and she again had some quiet sleep. At 8 A. M. she was lying very quiet, and has had a good deal of sleep; she has had no sickness, nor any bad symptom of any kind; the pulse has remained pretty steady, about 84; the tongue continues to be white, and the breath is rather fœtid: this is from the feverish attack, which I before mentioned, connected with the bowels, and which, as I told you, made me hesitate about operating yesterday, and now, 24 hours after the operation, she remains free from any bad symptom.

With regard to the after treatment of this case, and similar operations on the abdomen, I will only allude to one or two particulars. First, you will find it desirable soon after the operation, as after common tapping, always to give a dose of some narcotic, (and laudanum or black drop are less likely to cause sickness than morphia), to relieve the shock of the operation on the constitution, and enable the patient to bear the great alteration in the state of the abdomen, and its circulation, produced by the removal of the pressure of many quarts of liquid, and particularly if there is a good deal of pain. Secondly, you will observe that she has been allowed scarcely any thing but cold water, and that in very small quantities at a time, and she herself is unwilling to take more, on account of a little uneasiness of abdomen which follows it. No point is more strongly dwelt upon in Mr. Travers's excellent work on Injuries of the Intestines, than the necessity of almost entire abstinence from food of any kind, and it is no doubt of the greatest importance to prevent the motion and distension of the moveable viscera, which are so intimately connected with the abdominal wound: you would not for the same reason give saline draughts for fever, nor would you give purgatives nor large injections till time had been afforded for organization of lymph around the injured part; and you may notice that I gave her opiates in only half an ounce of liquid. The patient after an injury or operation can well afford, in general, to starve for a day or two, which is more than can often be allowed, though it would be equally desirable, after the operation for hernia, which you generally see performed when the patient is already a good deal exhausted. A third point in the after treatment that requires much judgment is the administration of stimulants for collapse and depression; in our patient none whatever has yet been required, but sometimes it would seem after this operation that much distress has arisen, as it sometimes does after tapping, from distension of the stomach by flatulence; and carefully distinguishing the pain arising from this circumstance from that of inflammation, much relief is experienced from the use of a teaspoonful of warm brandy and water, or arrow root with spice and with a little opium.

Twenty-four hours having now clapsed without any acceleration of pulse or tenderness of abdomen, our patient is already nearly safe from the more manageable form of acute peritonitis, which can generally be conquered by early depletion and calomel; of course, however, she is not yet safe from the more dangerous low form of this disease which you more often witness, and in which depletion is seldom useful; and I need not say, however favourable all circumstances appeared in this case for the performance of the operation, that no one can be free from much hazard, while a large silk cord hangs out of the abdomen, in a cavity formed by inflammation in the peritoneum itself, containing purulent secretion, necessarily of a somewhat foul character, because the cavity includes a mortified substance of considerable size, which has to soften and ulcerate away from its attachment to the uterus; a state which, nevertheless, may perhaps be borne by the peritoneum accustomed to a tumor, more easily than by a healthy one, for the same reason that an amputation for a disease is so much less dangerous than one performed for an accident.

Since the lecture was given the patient continued for a fortnight almost without any bad symptom, so that detailed notes are scarcely necessary; she has never once had any sickness, and has never had any fever. She was allowed to make water for *herself on the evening of the 23d, the day after the* operation, and was allowed arrow root and tea, of which she was unwilling to take much as it gave a little pain.

On the 24th, she had passed a very quiet night after another dose of laudanum, and she could take her food with less uneasiness; her pulse had risen to 110, but soft, and at 2 o'clock she complained of a good deal of pain in paroxysms, which made her cry out, and the abdomen was tender, but the pulse varied from 84 to 104, sometimes with sharpness, at other times quite soft and compressible; there was no anxiety of countenance, nor any nausea or sickness; and there was no tension or hardness of the abdomen. The wound also had entirely united, except where the ligatures passed out, and some serous pus was coming readily out of this opening. It was judged, therefore, that the symptoms were not inflammatory, but were connected with the bowels. A common injection was therefore ordered with 15 drops of laudanum, and the same quantity of laudanum was given by the mouth. The upper suture was also taken out, and two of the others cut across to relieve a little tightness of skin, but were not drawn away, as they were not yet loosened by suppuration.

These remedies were effectual, so that at 6 P. M. she was nearly free from pain, and had slept, the injection having brought away a little fæculent matter.

On the 25th she had had a most comfortable night, with a good deal of sleep, and the bowels had acted three times, and the tongue was clearer. The pulse was 120, but quite soft, and fuller than yesterday. All the sutures were removed.

On the 28th a little alarm was created by her feeling very cold and faint, with some tenderness of abdomen, but it was from the same cause as before, and some blue pill with rhubarb and magnesia removed these symptoms, and this she has required several times. The pus also was rendered foul and offensive by the state of her bowels, and a poultice was generally found best for the wound on this account.

On the 29th her beef-tea and arrowroot were changed for chicken and meat, with a glass of wine, and in a day or two a second glass was given, and a little brandy for the flatulence she occasionally suffered from.

On Oct. 3d she was ordered to sit up so as to allow the matter a more dependent exit than when she was lying on her back in bed; matter in small quantity, and of healthy character, readily coming away by the side of the ligature, and the rest of the wound remaining sound.

On the 11th the left leg began to swell, with considerable pain from the groin down the limb, especially in the calf, where the swelling was greatest, but there was not the

gradually subsided in a few days time,
she had no illness from it, and requ
only one or two gentle doses of blue
and rhubarb.

On the 13th, the 22d day after the op
tion, two of the ligatures came away v
gentle pulling, which had been occasion
tried for the few days preceding, and
the 16th the remaining ligature was
tracted, and the orifice entirely closed
the 19th.

INFLUENCE OF POSITION UPON THE INGUINAL AND FEMORAL RINGS.

The influence of the position of the tr
and of the lower extremity on the size of
inguinal and of the femoral rings, has
hitherto been accurately determined,
cording to M. Petrequin. From the res
of numerous experiments on the dead bo
he draws the following conclusions. Rotat
the thigh outwards, and flexing it on
pelvis, considerably enlarges the exter
inguinal ring; simply flexing the thigh d
not produce the same effect; but, if in
dition to flexing and rotating the thigh o
wards, the trunk is inclined forwards,
ring assumes its maximum size. Sitting
the hams, therefore, during the act of defe
tion, is dangerous in persons affected w
constipation and predisposed to hern
for the thighs being flexed and separate
and the trunk thrown forward, the ring
at its maximum size. This posture shou
also be selected to favour reduction of

ally the cylindrical form of the cells may be more or less distinctly seen on some portions of the epithelium; and now and then a single cell may be detected and examined separately. Besides the above-mentioned lamellæ, which resemble patches of tesselated epithelium, other membranous layers or lamellæ may be observed, which have to all appearance so distinctly a fibrous structure, that they might readily be confounded with bundles of muscular fibres. They are, however, nothing but cylindrical epithelial cells, arranged side by side, and viewed lengthways.

Of the other microscopic elements which are sometimes found in bile, and the occurrence of which must be regarded as pathological, are—1st, *Cholesterine*, or bile-fat. According to an opinion advanced by Bouisson, cholesterine does not exist in solution in the bile, but is only suspended in it, in a state of very minute division, and may therefore always be detected by the microscope. But it is probable that in the cases observed by Bouisson the separation of cholesterine from the bile, and its appearance in crystals, chanced to be a circumstance of frequent occurrence, for out of 100 cases in which Gorup-Besanez examined the bile, there were only three in which ordinary crystals of cholesterine were found. In one of these cases the patient had died of chronic nephritis, in the other of atrophy after typhus, and in the third of morbus cordis. In the latter case, the bile, after remaining for a short time at rest in a glass vessel, let fall an abundant sediment, which was observed, even with the naked eye, to consist of shining particles of crystalline matter. In the same case there were found about twenty gall-stones; so that this deposit may be regarded as the first step towards what would have been another calculus. 2. *Crystals of margarine.* Crystals of this kind were found by Gorup-Besanez in bile taken from the patient who died of chronic nephritis, and in whom he had found cholesterine. On evaporating a few drops of this bile, the crystals separated in the form of minute needles, arranged together in a stellate manner. The bile in this case was thus, by means of the microscope, as well as by chemical analysis, shewn to contain an unusually large quantity of fatty principles. 3. *Fat-globules.* In two patients who died, one from tuberculous disease and the other from typhus, globules of fat were found in the bile. 4. *Taurine.* The presence in human bile of the peculiar crystallized substance named taurine, which was first found in the bile of the ox, is another of the discoveries *which the microscope has made. This substance may be formed either by the action of acids on the bile, or by the spontaneous decomposition of this* fluid. To obtain it by the latter process, bile, when freed from mucus, and deprived of colour by animal charcoal, is to be dissolved in water and allowed to ferment: after this the solution is no longer clear, but has become milky. On evaporating this solution to dryness, and extracting it with alcohol, there is obtained a crystalline substance, composed of chloride of sodium and of beautiful microscopic crystals of taurine. These crystals, similar to those obtained from the bile of the ox, appear under the microscope as beautiful transparent four- and six-sided prisms, with oblique summits. On the addition of a little water and nitric acid they disappear. 5. *Blood.* When blood is present in the bile, its presence may be usually detected by the blood-corpuscles, unless the bile is very fluid. It has been stated that blood-corpuscles, when brought into contact with bile, become speedily dissolved; but Gorup-Besanez observes [as others have done] that this is not the case. If, however, the bile with which the blood-corpuscles are mixed is very concentrated, the corpuscles lose a portion of their watery contents by exosmosis, whereby they become small and shrivelled, but do not disappear or become indescernible. If, on the other hand, the bile is in a very diluted state, the corpuscles absorb water and become spherical, or even burst. 6. The presence of pus in the bile is usually dependent on abscess of the liver, of the bile-ducts, or of the gall-bladder. The pus-corpuscles may be readily recognised beneath the microscope. It has been stated that pus-corpuscles are never found in the bile, for that when mixed with this fluid they become rapidly decomposed and broken up; but this statement is for the most part incorrect. It is true that when pus is mixed with bile a number of the corpuscles are shortly disintegrated, leaving only their nuclei and nucleoli; but, at the same time, a number of others may be discovered quite unaltered. This power of partially destroying pus does not, however, belong exclusively to bile, for it has been found that a similar disintegration of its constituent cells takes place when pus is left by itself enclosed in a cavity for any length of time. Besides by the detection of its corpuscles, the presence of pus in the bile is also recognised by the peculiar physical qualities of the bile itself, which, when pus is present in it, assumes an acid reaction, becomes altered in colour, and gives out a peculiar odour, somewhat like that of decomposing gelatine. The acid reaction does not depend on the formation of any acid salt of choloidic acid, but on the presence of acetic acid, formed in consequence of the decomposition of pus. In a fatal case of pleurisy, Gorup-Besanez obtained an excellent specimen of purulent bile. The bile was very least constitutional disturbance. Mr. Hawkins believed that there was inflammation of the external iliac vein by the side of the ligature, obstructing its channel and causing swelling of the limb below, and pain in all the veins, but that they were not themselves inflamed, as there was no hardness about them, and the tenderness, though greatest in the trunks, was also felt generally in the limb. She was ordered to be kept quiet in with the leg elevated, and to have chamomile poultices applied for two or three days, and her wine was discontinued. The attack gradually subsided in a few days time, and she had no illness from it, and required only one or two gentle doses of blue pill and rhubarb.

On the 13th, the 22d day after the operation, two of the ligatures came away with gentle pulling, which had been occasionally tried for the few days preceding, and on the 16th the remaining ligature was extracted, and the orifice entirely closed on the 19th.

INFLUENCE OF POSITION UPON THE INGUINAL AND FEMORAL RINGS.

The influence of the position of the trunk and of the lower extremity on the size of the inguinal and of the femoral rings, has not hitherto been accurately determined, according to M. Petrequin. From the result of numerous experiments on the dead body, he draws the following conclusions. Rotating the thigh outwards, and flexing it on the pelvis, considerably enlarges the external inguinal ring; simply flexing the thigh does not produce the same effect; but, if in addition to flexing and rotating the thigh outwards, the trunk is inclined forwards, the ring assumes its maximum size. Sitting on the hams, therefore, during the act of defecation, is dangerous in persons affected with constipation and predisposed to hernia, for the thighs being flexed and separated, and the trunk thrown forward, the ring is at its maximum size. This posture should also be selected to favour reduction of a hernia when it is strangulated at the external ring, an event which M. Petrequin does not think as of such rare occurrence as other authors do. As regards the *internal crural ring* M. Petrequin infers from the experiments on the dead body, that it is most relaxed when the thigh is flexed, rotated inwards, and at the same time slightly abducted. Scarpa notices the relaxation of the ring when the thigh is flexed and rotated inwards, but he has not mentioned the additional influence of combining abduction with those motions."—*British and Foreign Medical Review, from M. Petrequin's Traité d'Anatomie Medico-Chirurgicale.*

ON THE

MICROSCOPIC CHARACTERS OF BILE.

By Dr. Gorup-Besanez[*].

The various substances which may be detected in bile by means of the microscope have been recently summed together by Dr. Gorup-Besanez. The following account comprises the chief results of his observations. If a drop of healthy bile be examined with a magnifying power of 300 diameters, there will be observed in the midst of a more or less deeply coloured yellow fluid: First, a number of *molecular granules*, very similar to the particles usually observed in fluids containing albumen, with the exception of their having a yellow or yellowish-brown colour, and being strongly reflective of light. These granules probably are either coagulated mucus of the gall-bladder, or particles of colouring matter: the latter is most likely to be their nature, because, when the mucus of the gall-bladder is coagulated by means of a weak acid, it does not assume a molecular form, but is converted into a transparent membranous substance. Secondly, *epithelium* of the gall-bladder and biliary ducts. This is tolerably abundant in most specimens of bile; but for the purpose of close examination it is best to procure it either by gently scraping the mucous membrane of the gall-bladder, or by allowing a portion of bile to remain stationary in a tall narrow vessel, and then collecting the sediment which forms in it. Obtained from either of these sources, and examined beneath the microscope, the epithelium appears in the form of irregular shaped polygonal lamellæ, of sizes varying from the 1-25th of a line, to the 1-20th of an inch in diameter. These lamellæ appear distinctly made up of a number of small polygonal, hexagonal, or roundish cells, which have slightly granular contents, and vary in length from 2-300ths to 3-500ths of a line, with a transverse diameter of about 1-500th of a line. Sometimes the cells of which these lamellæ are composed are arranged together in a tesselated form; at other times the lamellæ present a honey-combed appearance. Either of the appearances thus presented would seem to shew that the epithelium of the gall-bladder is of the tesselated variety, which, however, it is not, the deception being produced by seeing merely the free surface of the cells, which are in reality cylindrical in form, and belong to the variety of cylindrical epithelium. Occasionally the cylindrical form of the cells may be more or less distinctly seen on some portions of the epithelium; and now and then a single cell may be detected and examined separately. Besides the above-mentioned lamellæ, which resemble patches of tesselated epithelium, other membranous layers or lamellæ may be observed, which have to all appearance so distinctly a fibrous structure, that they might readily be confounded with bundles of muscular fibres. They are, however, nothing but cylindrical epithelial cells, arranged side by side, and viewed lengthways.

---

[*] Translated from Heller's Archiv, Heft. 1. 1846.

Of the other microscopic elements which are sometimes found in bile, and the occurrence of which must be regarded as pathological, are—1st, *Cholesterine*, or bile-fat. According to an opinion advanced by Bouisson, cholesterine does not exist in solution in the bile, but is only suspended in it, in a state of very minute division, and may therefore always be detected by the microscope. But it is probable that in the cases observed by Bouisson the separation of cholesterine from the bile, and its appearance in crystals, chanced to be a circumstance of frequent occurrence, for out of 100 cases in which Gorup-Besanez examined the bile, there were only three in which ordinary crystals of cholesterine were found. In one of these cases the patient had died of chronic nephritis, in the other of atrophy after typhus, and in the third of morbus cordis. In the latter case, the bile, after remaining for a short time at rest in a glass vessel, let fall an abundant sediment, which was observed, even with the naked eye, to consist of shining particles of crystalline matter. In the same case there were found about twenty gall-stones; so that this deposit may be regarded as the first step towards what would have been another calculus. 2. *Crystals of margarine.* Crystals of this kind were found by Gorup-Besanez in bile taken from the patient who died of chronic nephritis, and in whom he had found cholesterine. On evaporating a few drops of this bile, the crystals separated in the form of minute needles, arranged together in a stellate manner. The bile in this case was thus, by means of the microscope, as well as by chemical analysis, shewn to contain an unusually large quantity of fatty principles. 3. *Fat-globules.* In two patients who died, one from tuberculous disease and the other from typhus, globules of fat were found in the bile. 4. *Taurine.* The presence in human bile of the peculiar crystallized substance named taurine, which was first found in the bile of the ox, is another of the discoveries which the microscope has made. This substance may be formed either by the action *of acids on the bile*, or by *the spontaneous decomposition of this* fluid. To obtain it by the latter process, bile, when freed from mucus, and deprived of colour by animal charcoal, is to be dissolved in water and allowed to ferment: after this the solution is no longer clear, but has become milky. On evaporating this solution to dryness, and extracting it with alcohol, there is obtained a crystalline substance, composed of chloride of sodium and of beautiful microscopic crystals of taurine. These crystals, similar to those obtained from the bile of the ox, appear under the microscope as beautiful transparent four- and six-sided prisms, with oblique summits. On the addition of a little water and nitric acid they disappear. 5. *Blood.* When blood is present in the bile, its presence may be usually detected by the blood-corpuscles, unless the bile is very fluid. It has been stated that blood-corpuscles, when brought into contact with bile, become speedily dissolved; but Gorup-Besanez observes [as others have done] that this is not the case. If, however, the bile with which the blood-corpuscles are mixed is very concentrated, the corpuscles lose a portion of their watery contents by exosmosis, whereby they become small and shrivelled, but do not disappear or become indescernible. If, on the other hand, the bile is in a very diluted state, the corpuscles absorb water and become spherical, or even burst. 6. The presence of pus in the bile is usually dependent on abscess of the liver, of the bile-ducts, or of the gall-bladder. The pus-corpuscles may be readily recognised beneath the microscope. It has been stated that pus-corpuscles are never found in the bile, for that when mixed with this fluid they become rapidly decomposed and broken up; but this statement is for the most part incorrect. It is true that when pus is mixed with bile a number of the corpuscles are shortly disintegrated, leaving only their nuclei and nucleoli; but, at the same time, a number of others may be discovered quite unaltered. This power of partially destroying pus does not, however, belong exclusively to bile, for it has been found that a similar disintegration of its constituent cells takes place when pus is left by itself enclosed in a cavity for any length of time. Besides by the detection of its corpuscles, the presence of pus in the bile is also recognised by the peculiar physical qualities of the bile itself, which, when pus is present in it, assumes an acid reaction, becomes altered in colour, and gives out a peculiar odour, somewhat like that of decomposing gelatine. The acid reaction does not depend on the formation of any acid salt of choloidic acid, but on the presence of acetic acid, formed in consequence of the decomposition of pus. In a fatal case of pleurisy, Gorup-Besanez obtained an excellent specimen of purulent bile. The bile was very thin, of a light-yellow colour, had a turbid milky aspect, a cadaverous odour, and a strong acid reaction. After standing for some time it let fall a sediment exactly similar to a purulent one. Examined beneath the microscope this sediment was found to consist entirely of pus cells, some of which were more or less broken up, but others quite entire, possessed of their distinct contour, and containing a nucleus with two or three nucleoli. On diluting a portion of the bile with water, and applying heat, flakes of albumen were thrown down. The presence of pus in the bile, therefore, was unquestionable, though whence it was derived could not be satisfactorily ascertained, for only a few imperfect particulars of the examination of the body were furnished to Gorup-Besanez. Most probably there was an abscess of the liver, which had communicated with the bile-ducts. 7. On the addition of a little liquor ammoniæ to bile beneath the microscope, crystals of ammonio-phosphate of magnesia, similar to those obtained from urine by the addition of ammonia, are at once abundantly formed, shewing clearly that the bile contains magnesia.

RECOVERY FROM A SEVERE INJURY TO THE GRAVID UTERUS.

THE wife of a Madras sepoy, in the last stage of pregnancy, was riding on a bullock, when the animal stumbled and fell, by which she was thrown forward, and pitched on one of the horns of the bullock, which entered about an inch above the os pubis, penetrating into the cavity of the womb. The wound was about two inches long, through which the hand of a child protruded, and from which there was slight hæmorrhage. Labour was induced *per vias naturales*, and a full-sized child was born, but did not survive its birth. It had been injured by the horn on its neck and shoulder. On expulsion of the contents of the womb, considerable protrusion of the intestines took place, but they were easily and speedily returned to the abdomen, and the usual means, such as stitches, sticking-plaster, compress and bandage, applied to prevent their escape. On the appearance of inflammatory symptoms recourse was had to the application of twenty leeches, the administration of castor oil, and employment of fomentations, which quickly subdued the rising inflammation. Next day there was not a bad symptom, and she rapidly recovered, with scarcely any other feeling than is common to women after the ordinary process of delivery.—*From the India Journal of Medical and Physical Science.*

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By NORMAN CHEVERS, M.D.

[Continued from p. 703.]

CONGENITAL NARROWING OF THE PULMONARY ORIFICE (*continued.*)

VIII. *Contraction of the right arterial ostium, with patency of the foramen ovale, the ventricular septum complete, and the arterial duct obliterated.*

IT is evident that, in the cases where this species of malformation occurs, the inflammatory or other morbid condition which has produced the arctation of the pulmonary orifice has become established at a period when the ventricular septum has obtained its full development. The obstruction to the pulmonary circulation determines the permanency of the foramen ovale, but the arterial duct becomes naturally closed. It is difficult to explain the difference in this latter respect between the cases now under consideration, and those of class III.,[*]—in which arctation of the pulmonary orifice is attended with a perfect condition of the ventricular septum, but with a pervious state both of the foramen of Botal, and the ductus arteriosus,—otherwise than by the conjecture that, in cases of the eighth class, the impediment in the artery has originally been slighter in than those of the third; or that, in the latter instances, the arterial lesion has been established for some time previously to birth; while, in the former, disease has been set up in the vessels almost immediately after the commencement of respiration, when the arterial duct has begun to close, the foramen ovale still remaining open.[†]

Whatever may be the true explanation of this point, it is however certain that many causes of obstruction to the circulation which are capable of determining the cy of the septal opening, prove quite cient to prevent the closure of the il canal: hence the frequency of im- tion of the auricular septum, and the of permanence of the duct. In of the cases of this class which I have to quote, there appears to be to believe that the foramen ovale ecome closed, but that the progressive se of obstruction at the pulmonary had given rise to so great distension right auricle as to occasion perforation membrane of the ovalian fossa.

---

[*] Page 374.

[†] Bernt of Vienna (quoted by Mr. A. Taylor) states, that if a child respire only for a few seconds, the duct becomes contracted at one of its extrmeities, commonly at the aortal end. I have not satisfied myself of the correctness of this observation, but there appear to be strong grounds for believing that the process of closure usually commences later in the foramen than in the arterial duct.

e two following cases are rendered in- ing by the close analogy which they to other instances previously detailed. first is also remarkable from the fact the lesion of the arterial orifice was isly attributable to the presence of a d deposit, and did not appear to be ed with faulty development of the r apparatus.

. Edward Hallowell* examined the of a female child, æt. 6 months, who om birth been more or less affected difficulty of respiration, and latterly subject to cough, during the paroxysms ich the face became suffused, and the nd ends of the fingers cyanosed. On tion, the body was found to be well d, with considerable embonpoint, and no a; the fingers were curved inwards, and urplish colour. The lungs were quite y, of a light pink or rosy hue, not ged in the slightest degree, and per- . healthy throughout. The mucous rane of the trachea and bronchial was slightly injected; the pleuræ free effusion; pericardium healthy. The measured from apex to root about es; its transverse measurement was 2½ inches. The right ventricle was enor- y hypertrophied, there being scarcely avity; its walls were about 5 lines in ess, the septum 6½ or 7 lines: those left ventricle were about 2 lines: the of this ventricle was of natural size. iameter of the aorta nearly double that *pulmonary artery*, the orifice of was almost entirely obliterated by a excrecence, arising from the middle nar valve upon its under surface, and ling to the others, to which it adhered. xternal surface of this vegetation was ted, having a warty appearance, re- ing a small raspberry, though less r in its conformation, presenting, cut into, an almost cartilaginous hard- and adhering very strongly to the e of the valve. The obstruction to tery was so great that a silver probe with some difficulty: the coats of rtery appeared to be thinner than natural. The right auricle was greatly dilated, its capacity being double that of the left; the greatest thickness of its parieties, one line, that of the left, half a line. The *foramen ovale* was patulous, its opening being about 3 lines in diameter. The tricuspid, mitral, and aortic valves were healthy. The liver was greatly enlarged and congested, occupying one-third of the abdominal cavity. The other organs were not examined.

M. Lallemand relates* the case of a woman who, from her earliest infancy, was liable to become in some measure cyanosed upon unusual exertion. Her respiration was habitually oppressed. At the age of 47 years she ceased to menstruate, and began to suffer from palpitations attended with acute pain in the precordial region, and her lips and general surface became of a livid blue colour. She also became subject to attacks of profuse epistaxis. At the age of about 57 years she was attacked with hemiplegia of the left side of the body, the paralysed limbs being occasionally convulsed: bleeding gave some relief, but she died a short time after the paralytic attack. The heart was found enormously enlarged; the right auricle was greatly dilated, and contained seven ounces of blood. The *auricles communicated* by an opening about 4 lines in diameter. The right auriculo-ventricular orifice was contracted. The right ventricle was not more than large enough to contain a pigeon's egg, its parietes being from 11 to 16 lines in thickness. The *ventriculo-pulmonary orifice* presented a septum which was convex towards the artery and pierced in its centre with a perfectly circular orifice 2½ lines in diameter. Above this the artery presented nothing material. The left auricle was much larger than natural; the left ventricle was also of very large size, and its walls hypertrophic. The *arterial canal* was entirely obliterated. In the anterior part of the right hemisphere of the basin was found an encysted purulent collection.

It will be remarked, in the above instances, how completely the condition of the right cavities of the heart corresponded with that which was noticed in a set of cases observed by Dr. W. Hunter and others (p. 280), where obliteration of the pulmonary artery was attended with an open state of the foramen ovale and arterial duct, the ventricular septum being complete; as also with that noticed by M. Bapt. Schuler, in a case (Class III. p. 374), where arctation of the pulmonary orifice, (also unaccompanied by perforation of the septum,) had in like manner determined the permanence of the canal and duct. The instances at present

---

nerican Journal of Medical *Sciences*, vol. . 265.

* Recherches Anatom.-Pathol sur l'Encephale, t. ii. p. 7.

under consideration, in which the foramen was open and the duct closed, complete the series. In both of these cases the main current of blood, failing to gain a free passage through the right ventricle and pulmonary artery, was diverted into the left cavities through the open foramen ovale; hence, the right ventricle, being deprived of its due quantity of blood, became greatly diminished in capacity; the occurrence of this contraction being doubtless considerably aided in M. Lallemand's case, by the narrowed condition of the right auriculo-ventricular orifice. It is probable that, in each of these individuals, the aggravation of the symptoms, and ultimately the fatal event, were owing to gradually increasing contraction in the right ventricle and pulmonary orifice, and, possibly, also to diminution in the size of the foramen ovale.

It is to be regretted that in the following case no distinct idea is given of the size of the right ventricle. As, however, it is merely stated that the heart was "*somewhat* enlarged," and that the walls of the right ventricle were greatly hypertrophied, it is probable that its cavity was, at least, not very greatly dilated.

Dr. Robert Spitta lately communicated to the Medico-Chirurgical Society[*] the case of a lady, ætat. 40, who was of diminutive stature and pigeon-breasted, but without any positive deformity. She had cyanosis from birth, indicated by blueness of the cheeks, lips, and tongue. The heart's action was said to have been regular when at rest, but sudden exertion produced palpitation and dyspnœa. She suffered very much from cold. In March 1845, she was suddenly seized (while at rest) with dyspnœa, and partial syncope, accompanied by convulsions, and afterwards with intense pain referred to the epigastrium, loins, and hypochondria. This condition lasted twenty-four hours, when she died. The patient had previously suffered from serious attacks of a similar nature occurring at long intervals. In November 1843, she had also an anasarca of the abdomen and lower extremities, from which she completely recovered, and never afterwards became dropsical. She had never suffered from rheumatism. The heart was found to be heavy and firm, and somewhat enlarged. The hypertrophy was chiefly on the right side, the right ventricle being as thick as the left, and the right auricle three times as thick as the left auricle. The *foramen ovale* was patulous, the opening about 4 lines in diameter, and valvular. The auriculo-ventricular valves were thickened, but moveable: the aortic valves healthy. Above the semilunar valves of the *pulmonary artery* an adventitious membrane was stretched completely across; it was a line in thickness, and perforated in its centre by a mere slit with margins of a red colour, and fringed with fibrine of the blood, (vegetations?) The three semilunar valves were thrown up, as they are naturally during the systole of the heart, and fixed in that position by the adhesion of (what would have been) their free borders to the adventitious membrane.

The following case is singular, from the existence of a remarkable malformation of the right ventricle which has been noticed in connection with several kinds of congenital lesion of the organ, but which has not, so far as I am aware, been observed in any other instance of narrowing of the pulmonary orifice.

M. Obet narrates[*] the case of a female child who began to suffer from the symptoms of blue disease a few days after birth. She was also subject to occasional prolonged attacks of bilious vomiting. She died at the age of 5 years from aggravation of the cardiac disturbance. The right cavities of the heart were found distended with blood and fibrinous concretions. There was very considerable thinning of the walls of the right ventricle, especially at its apex, where they were not more than a quarter of a line in thickness. An unnatural enlargement of the tricuspid valves (musculi pectinati?) caused the right ventricle to be partitioned into several cavities. The left cavities of the heart were narrowed, the *foramen ovale* was open, and about 4 lines in diameter; both arterial apertures were narrow, and the width of the *pulmonary* orifice was less than that of the aorta.

In this case, as in most of those which have still to be cited, the obstruction to the pulmonary circulation had produced its ill effects principally by occasioning impediment to the emptying of the right ventricle, there being, in all probability, in the first place, neither sufficient contraction of the pulmonary orifice, nor a sufficiently free communication between the auricles to occasion diversion of the main current of blood through the auricular septum into the left cavities.

One of the earliest recorded instances of contraction of the pulmonary orifice is that related by Morgagni. A young woman, who had always been sickly from the time of her birth, whose breathing was oppressed, and whose skin was of a livid colour, died at the age of 17 years. The heart was found to be small, and rounded at its basis; the right auricle was more fleshy than the left, and twice as large; the *foramen ovale* would admit the little finger. The tricuspid valve was malformed, two of its curtains being unusually small. The valves of the *pulmonary artery* were in a natural state at their base, but their upper edges were cartilaginous, and even partially ossified, and so united together as to leave a passage for the blood not larger than a lentile. This opening was furnished with membranous and fleshy excrescences, so placed as to answer the purpose of valves, by allowing the exit of blood from the ventricle and preventing its return.

---

[*] MEDICAL GAZETTE, vol. xxxvii. p. 205.

[*] Rev. Méd. t. vi. p. 175.

In the following instances it is by no means clear that obliteration of the foramen ovale had not been effected subsequently to birth; on the contrary, it appears to be highly probable that in both cases the membrane of the fenestra ovalis suffered perforation in consequence of the gradually increasing obstruction at the entrance of the right ventriculo-arterial orifice.

Dr. Craigie has given the following narrative* :—

A countryman, æt. 19, had, from infancy, been always subject to shortness of breath, which was very urgent in cold damp weather; the lips, hands, and nails, had always been of a purple or livid colour. From his earliest recollection he had always been subject to palpitation, aggravated to an extreme degree by exertion. During the last two years there had been occasional swelling of the feet and ankles. Notwithstanding these complaints, he continued to work at agricultural labour of a light nature until about five weeks before his death, when he was suddenly attacked with rather copious hæmorrhage from the lungs while sitting quietly by the fire. In a week after this he came under Dr. Craigie's care. The hæmorrhage had recurred several times during the week. The face, lips, tongue, interior of the mouth, and nails, presented deep purple and leaden tints. The anterior part of the chest was very prominent, the sternum arched, and the shoulders much elevated. Respiration was 28 in a minute, performed by the accessory muscles with much labour. There were physical signs of extensive bronchitis, with scanty secretion. Extensive dulness over the cardiac region. The cardiac beats were from 92 to 96 in the minute, performed with rather strong impulse, and a rough rasping or sawing murmur, considerably prolonged, accompanied the first sound; this was heard most distinctly on the right side of the sternum, immediately between the third and fourth ribs. The more urgent symptoms were greatly relieved by perfect rest and the limited use of anodynes and anti-spasmodics; but, five days before his death, hæmoptysis again occurred, but soon ceased, the heart's action becoming strong and labouring, with a very small pulse at the wrist. The lividity increased; the patient suffered much from coldness of the surface and hurry of respiration, which progressively increased until his death. The pericardium was found to contain ℥ij. of serum. The heart, which weighed eighteen ounces, was much enlarged, especially its right auricle. The membrane of the *fenestra ovalis* was thin and reticulated, and presented many minute holes, and, at its lower limbus, an elliptical hole, one-third of an inch in diameter, communicating directly with the left auricle. The right ventricle was large in capacity, and its walls were much hypertrophied. The origin of the *pulmonary artery* was provided with a firm opaque membrane, concave towards the ventricle, convex towards the artery, and so elevated as to form a truncated cone, with a small aperture in its centre and apex, not more than large enough to admit a common probe. This aperture was surrounded by a fringe of warty prominences. The upper part of this cone presented three membranous slips, indicating the position of the attachment of each valve. The left auricle and ventricle were of the natural sise, and otherwise healthy. The state of the left lung only is mentioned; portions of its tissue were solid, firm, and unusually dark-coloured, and it contained several dilatations of the bronchial tubes, one of which was as large as a filbert. One of the kidneys was atrophied, and its secreting portion almost lost; the other was large, but in some spots presented traces of the granular change.

M. Cherrier* attended a man ætat. 34 years, who had been free from any signs of heart affection until the age of 14 years, when he fell into a deep ditch full of water in the winter time. For some days after the accident he suffered from a low fever, and, during a protracted convalescence, blueness of the lips and extremities of the fingers manifested itself; and, from that time up to his death, the cyanosis continued to become aggravated, growing more and more intense during the last two years of his life. The discolouration of the entire body was extreme. During the latter period he suffered from four severe attacks of pneumonia. For the cure of these, bleeding was employed; but this produced such great weakness that it had to be discontinued. At the age of 28 years he married, and had two children, which died of scrofulous affections at the age of 3 years. He suffered from extreme debility, palpitations, coldness of the entire surface, and difficulty of breathing. He became affected with a severe pleurisy of the left side, which was attended with great aggravation of the dyspnœa. This was followed by two attacks of apoplexy; the last of which was followed by hemiplegia, and proved fatal. The left pleura was found to be filled with sanguinolent serum, compressing the lung, and evidently the product of acute inflammation. The heart was enormously large, its vessels and cavities, and more especially the ventricles, being engorged with blood. The right cavities were singularly large; the auricles exteriorly did not present any very remarkable appearance, but they communicated by an orifice more than an inch in diameter. The walls of the ventricles were diminished in thickness; the interventricular septum was complete; the free edges of the *pulmonary sigmoids* were ossified, rendering the orifice so narrow as scarcely to admit a crow-quil. There was great congestion of the nervous centres and abdominal viscera.

---

* In a valuable and elaborate paper published in the Edinburgh Medical and Surgical Journal, vol. lx. p. 268.

* Quoted by M. Gintrac, op. cit. p. 180.

There can be little doubt that, in the whole of the above-cited instances of this class, the narrowing of the pulmonary orifice dated from a period antecedent to, or very shortly after, birth,—although, as generally occurs in every form of congenital contraction, the narrowing appears to have continued to increase as life advanced:—still, in all instances of this class, it will be necessary to ascertain whether the obstructive disease of the pulmonary valves has not been set up at a considerably later period of life, either occurring in coincidence with accidental non-occlusion of the foramen ovale, or becoming in itself the cause of perforation of the interauricular septum, as the occurrence of such a train of lesions is not altogether improbable.

The naarator of the following case believed that the perforation of the auricular septum was due in his patient to accidental causes; but this appears to be questionable, as the precise condition of the structures surrounding the opening are not stated with sufficient accuracy to enable us to judge whether it was due to imperfect development or to ulceration:—

Cajetanus Tacconus relates* the history of a beggar-girl, about 15 years old, who walked with great difficulty, and was remarkably cyanosed. She suffered from constant palpitation of the heart, and extreme weakness in all her limbs; was able to swallow only very thin or liquid aliment, and even that not without much difficulty. Her complaints were much increased during winter; she had as yet no appearance of the catamenia; her pulse was quiet and weak. She attributed this disorder to a sudden and excessive fright which she experienced, the consequence of a fall from a great height, at the age of 5 years. She remained under the author's observation for three years; and during this period he could never discover that her nostrils, thorax, or abdomen had the least degree of motion in respiration. At the end of this time, during a very severe season, she began to complain of pain in her left side, and to discharge by the mouth a black grumous blood. She died on the four-and-twentieth day after the accession of these symptoms. It was found, on inspection, that the contents of the abdomen encroached so much upon the thorax as to render the capacity of the latter cavity extremely small. The lungs were hard, dry, and contracted,; the left lobe was of a dark livid colour, and adhered to the pleura at the part where the patient had complained of pain. About three ounces of black grumous blood were found on the surface of the diaphragm and in the trachea. The shape of the heart was cubical rather than conical; the left ventricle, in its shape and structure, appeared as the right ventricle usually does in a natural state, and *vice versâ*. The valves of the *pulmonary artery* were adherent to each other in such a manner that water could be pressed into the artery only by a small opening; and this the author supposed to have been made by a probe with which he examined the state of the valves. The pulmonary vein (possibly the veins united in a single trunk) was empty and contracted; the *canalis arteriosus* was closed, but the *foramen ovale* was found open, and larger than it usually is in the fœtus. The remainder of the dissection afforded nothing preternatural.

IX.—*Contraction of the pulmonary orifice, the ventricular and auricular septa being complete, and the arterial duct obliterated.*

In certain cases of this description it may also be extremely doubtful whether the abnormal condition of the artery is congenital or of later date, the duration and character of the symptoms being the only means by which a decision can be formed; but, in the examples which I have selected as illustrative of this species of malformation, the appearances discovered after death appear to have rendered the congenital origin of the disease a matter of almost absolute certainty. In the following case by Dr. Blackmore, where the appearances discovered were of the most rare and singular character, it is probable that the foramen ovale had become closed previously to birth, and that a ductus arteriosus had never been developed, as the arrangement of the parts was such that the presence of those communications during the fœtal existence of the child was rendered wholly unnecessary:—Here the narrowness of the pulmonary artery does not appear to have been the primary lesion.

---

* *De Bononiensi Scientiarum et Artium Instituto atque Acad. Commentar.* t. vi.; Bonon. 1783, and Med. Jour., vol. vi. p. 407.

A female infant began to suffer from the ordinary symptoms of blue disease at the age of 2 months. All her complaints became aggravated after her inoculation at the age of 16 months. Assimilation was imperfectly performed. She never walked alone, nor talked intelligibly. The body was extremely puny, and the chest chicken-breasted; the pulse at the wrist was small, very feeble, but regular. Death occurred at the age of 3½ years, after a flow of black blood from the mouth and nose. The heart was found to be so large as to hide and compress the lungs; the right auricle and superior cava were greatly distended with blood; the right ventricle was greatly hypertrophied; the left ventricle was extremely small in comparison with the right. Where the left auricle should have been, only small muscular vestiges were found, without cavity. On attempting to lay open what at first sight appeared to be the tip of the left auricle, the knife entered a large single cavity, between which and the left ventricle no communication existed, except through a small fissure, the natural ventricular opening being occluded by a firm adherent fleshy membrane. From the posterior superior part of the right ventricle arose the aorta, much dilated; immediately below the aorta a small *pulmonary artery* had its origin. The left ventricle held a small coagulum of black blood, which must have entered it by the fissure above described, and which was its sole outlet. Its substance was healthy; no *ductus arteriosus* remained. The right auricle proper received the trunk of the superior cava, around the orifice of which was attached a fine delicate membrane. Two small pulmonary veins entered the inferior part of the left auricle, which was nearly obliterated, and one large vein entered its superior part. The auricular septum presented the *fossa ovalis* in its natural state, without communication with the right auricle. The left auricle had, however, a direct communication with the left ventricle by means of a small fissure through which the blood returning to the lungs must have passed, and thence into the right side of the heart. The lungs were small, particularly the left, and dense, like flesh; but there was no tubercular deposit or confirmed induration.[*]

In the remaining instances of this class which have been observed, the lesions were of a far more simple character than in the above example:—

Dr. Elliotson[†] refers to the case of a very young woman who died in St. Bartholomew's Hospital. A bellows sound was heard in the precordial region, and the patient suffered from venous congestion and dropsy. The walls of the right ventricle appeared to have grown up around the mouth of the pulmonary artery, so that the opening from the ventricle was no larger than the circumference of a goose-quill; and a short canal of this size had to be traversed before it reached the mouth of the *pulmonary artery*, which was of natural size. Dr. Elliotson believed this malformation to be congenital, as two little supplementary right ventricles existed here: one leading from the pulmonary artery, and the second from the first. The heart is in the Museum of the College of Physicians.

Dr. Craigie details[*] the case of a railroad labourer, ætat. 44, who became a patient of Dr. Graham, with symptoms which were at first mistaken for those of fever. His history was indistinct. About two weeks previously, after a debauch of ten days' duration, he was seized with severe cough, hoarseness, headache, and thirst, and gradually lost flesh and strength. When admitted to the Infirmary his intellect seemed rather confused; he complained of frontal headache, and denied that he had any other local uneasiness; was very hoarse, and spoke very indistinctly, apparently from a very hurried state of his respiration. He had frequent cough, without expectoration; pulse 120; face rather livid. After his admission, the respiration continued very frequent—about 60 in the minute. He was delirious and restless at night, and died on the third day. Both lungs were found to contain tubercles, and were much consolidated: the apex of the left was occupied by a large tubercular cavity. The heart weighed thirteen ounces. The right auricle was much dilated, and decidedly thicker and firmer than usual. The right ventricle was much hypertrophied, its walls being nearly as thick as those of the left usually are, and it cavity was at the same time smaller [than natural?]. The *pulmonary semilunar valves* were so united as to form a ring, which could only admit the point of the little finger. The artery above was much dilated, and its walls attenuated. The left cavities appeared healthy. The aortic semilunar valves were somewhat thickened, but were adequate. The aorta was also dilated at its arch, but not to the same extent as the pulmonary artery.

Death seems to have been produced in this individual by the sudden aggravation of his pulmonary disease, rather than in consequence of the cardiac obstruction, which does not appear to have been excessive. I have met with several instances of heart disease in which the cavity immediately posterior to the seat of obstruction appeared, when first examined, to be in a state of concentric hypertrophy, but this condition was always, in reality, merely apparent, the cavity becoming expanded so soon as the cadaveric rigidity of the heart had ceased. This is liable to occur in cases where death is rather suddenly induced by accidental causes which do not immediately influence the heart.

---

[*] Edinburgh Med. and Sur. Jour., vol. xxxiii. p. 268.

[†] The recent Improvements in the Art of Distinguishing the various Diseases of the Heart, p. 21, pl. 1, fig. ii.

[*] Op. cit. p. 271.

The following case affords an excellent illustration of the effects of extreme obstruction to the circulation through the right cavities of the heart, where the embarrassment of the over-distended auricle and ventricle is not relieved either by an open state of the ventricular septum or by patency of the foramen ovale.

M. Fallot has recorded the case of a woman, ætat. 63, who, after the cessation of the menstrual discharge at the age of 47, became subject to dyspnœa. The heart beat tumultuously, but the pulse was regular, although hard and vibrating. Relief appeared to be afforded by bleeding, which was frequently practised. Three months previously to her death she was seized with violent pains in the region of the heart, and with frequent attacks of vertigo. Her respiration became more embarrassed, and she was unable to stand. Two or three weeks before her death she became delirious. She expired in great agony. The heart was found to weigh 14½ ounces; by its excessive development it had pushed the mediastinum into the right cavity of the thorax. The right auricle and ventricle, and the two venæ cavæ, were much enlarged; and, in consequence of the dilatation of the cavities on this side, the tricuspid valve did not nearly close the auriculo-ventricular opening. The walls of the right ventricle were softened, and much thinned, but were covered by a thick lamina of coagulum, composed of different coloured strata, and partially enveloping the columnæ carneæ. In place of the semilunar valves of the *pulmonary artery*, a thick membrane, attached to the circumference of the orifice of the artery, was found; its concavity, which was directed towards the ventricle, was pierced at its centre with an opening about the size of a goose-quill. The free and attached borders were thicker than the rest of this membrane. The left cavities of the heart were of the natural size, and were perfectly healthy. The tissues of the lungs were much compressed by the enlarged heart*; the liver and entire system of abdominal veins were found gorged with blood*.

I have now endeavoured to trace out, by means of a classified series of fifty-five detailed cases, the several forms in which congenital narrowing of the pulmonary orifice is wont to occur; detailing the various modifications of the lesion from its most complicated form, in which the arterial impediment, becoming established at a period when the heart is still in the condition of a single auricle and ventricle, prevents the development of the cardiac septa, and determines the permanence of the arterial duct, until we arrive at the simplest condition in which the malformation can possibly occur; *i. e.* as a defect which is confined to the pulmonary ostium, and which has been produced at so late a period as to have no influence whatever in preventing the other portions of the heart and its appendages from attaining their full and normal development. I should have been content with illustrating each species of the lesion by merely one or two examples, had it not been for the singular fact, that nearly every instance of this kind of malformation has been found to present certain marked peculiarities which in a striking degree distinguish it from all the other recorded instances to which it is allied; in fact, it appears that scarcely any two cases of this kind perfectly agree: the history of each appears to develope some new feature in cardiac pathology, and to afford some additional insight into the inexhaustible resources by which nature is prepared to enable the central organ of the circulation to adapt itself to those vicissitudes which are so liable to affect it during the progress of its development.

I shall reserve the discussion of many important points connected with the history of the above lesions until I arrive at the consideration of the morbus cæruleus, and the diagnosis, prognosis, and treatment of diseases originating in the pulmonary artery.

[To be continued.]

MANCHESTER MEDICAL SOCIETY.

THE following gentlemen have been elected office-bearers of the Society for the ensuing session:—

President.—Dr. J. L. Bardsley.

Vice-Presidents.—Dr. Black, Mr. Noble, Mr. Hunt, Dr. Radford.

Councillors.—Messrs. Crompton, Dorrington, Brownbill, Ker, Franklin, Middleton, Southam, Bent, Goodman, Golland, W. Smith.

Treasurers.—Drs. Ashton and Lambert.

Honorary Librarian.—Mr. Stone.

Hon. Secs.—Drs. Renaud and Reid.

---

* It is probable that in this as well as in other cases where it has been stated that the structures of the lungs have become altered by the pressure of a dilated heart, the pulmonary lesions have *not in reality* been due to this cause, but have *resulted* either from imperfect expansion, congestion, pneumonic consolidation of the lungs, pleuritic effusions, or other similar conditions.

* As quoted in the London Medical and Surgical Journal, vol. v. p. 61.

CASE OF DIABETES MELLITUS, WITH OBSERVATIONS.

By Thomas Chambers, M.D.
Late Physician to the Chelsea Dispensary.

Frederick C., an overgrown lad of 16, perceived for the first time in the last week of November, 1844, that he passed more urine than usual, and was getting thinner than heretofore. His mother besides remarked that he had become silent and morose, that he drank much more than usual, and remembered his having complained of occasional pain in the loins as if from unwonted weakness. His appetite, which from childhood had been delicate and fickle, never excessive, then entirely left him, and a constant state of nausea produced in him a disgust at the sight or mention of food. His intellect became embarrassed, and his feelings dull and unnatural. Although the boy was forced soon to take to his bed, medical advice had from extraordinary prejudice not been applied for till I saw him on the 31st December, five weeks after the first material alteration in his health. He was then lying in bed, extremely sulky, and unwilling to be roused for the necessary examination. The body was extremely emaciated, the skin harsh and dry, but rather cold, the tongue red and clean. The only pain complained of was in the head, which he said was much increased when I drew back the curtains and allowed the light to fall full upon him. He lay down quite flat in bed, and breathed somewhat slow and heavily. The urine was very copious, clear, acid, of a darker colour than usual in diabetes; its specific gravity was 1·036, and it was indisputably sweet to the taste. There was such an abundant quantity of what I believe to have been phosphate of lime, that it was deposited on boiling the urine in spite of its more than ordinary acidity. He grew rapidly more and more lethargic, but was capable, as long as he lived, of being roused by shaking, and got up to void his secretions when requisite. Though puzzled to explain this state of system, and still more puzzled to treat it, I had seen quite enough on the first visit to give a most unfavourable prognosis, and was not surprised *to find the* shutters closed five days after I had first seen the patient.

A post-mortem examination was made of the body in the evening of the same day that he died. On opening the chest we found some recent friable lymph in both pleuræ, but no fluid. The posterior parts of the lungs were red and hard, gave out much fluid when cut, and did not crepitate on pressure. A careful search could detect no tubercles in the pulmonary tissue. The pericardium was adherent throughout, and the heart, possibly from its coats being thus thickened and disguising its form, appeared much larger than natural: the interior of the organ was unchanged. There was no alteration of structure in the kidneys visible to the naked eye, nor in the liver, and the bile was thick and of a dark green colour. The bladder was larger than usual, and was full of urine similar in appearance to that passed in life.

The head was then opened. On removing the scull-cap, the superior veins of the brain were seen filled with dark blood. The arachnoid under which they wound was thickened and opaque, both on the upper surface and in the part which dipped between the hemispheres; it had not lost its moisture or polish. At the base of the cranium, however, the membrane was reddened and united by shreds of lymph in some places to the opposite surface; but these were easily broken when the brain was raised. Around the cerebellum the adhesions were apparently of older date, being so firm that the viscus could not be taken out whole. The roundness of the cerebral convolutions appeared to me little if at all depressed. I was therefore not prepared to find, as I did on cutting into them, the lateral ventricles filled with three or four ounces of fluid, and the cavity of that on the left side perceptibly dilated. The central part of the brain was quite firm and healthy, nor was there any congestion except in the upper part as above mentioned.

The fluid which flowed from the lateral ventricles was opalescent, and when examined by the test proposed by Baron Liebig, viz. the deoxidization of copper, I found contained a large quantity of sugar.

We have here a case of disease, pure, and innocent of any artificial interference, till it was too late for it to modify the original course of events—a circumstance rare in the present day, when medical aid is so promptly and liberally bestowed. We ought not, therefore, to let those few instances which do occur pass by without gaining peculiar instruction from them. I would beg to call attention to a few parts of the above history which offer food for practical meditation.

1. *The rapid progress of the disorder.*—Was the hasty fatal termination a mere accident, caused by arachnoiditis chancing to be added to diabetes, or did not rather the extreme emaciation and harsh ruggedness of skin, and the rapid formation of sugar, even in the unhealthy secretion of the brain, show that the original disease proceeded as rapidly as its more dangerous consequence? Dr. Dobson* mentions a case of this usually lingering complaint as having ended in death in five weeks, but besides that one I am not aware of another proof of its being so rapidly mortal.

2. *Its conjunction with an inflammatory state.*—Dr. Cleghorn† attributed to the use of pure animal food the proneness of some diabetics to inflammations, but here we have that result arising in a boy whose state of nausea prevented his taking anything but broths and gruels. The Germans have contributed to ideal pathology the notions of a rheumatic, of a gouty, of a scrofulous, inflammation: might not a diabetic inflammation be added to the list?

3. *The situation of the local affection.*—It is of some importance to be aware of the occasional occurrence of such cases as these, in order that even when we find the lungs of our diabetic patients sound, we may still be guarded in our prognosis of the duration of life.

It may be observed that *the two disorders, the local and the constitutional, manifested their symptoms unmasked by one another.* It is true I did not discover the inflammation of the brain, but I am inclined to attribute that oversight to want of observation on my part, my attention being taken up with the other class of symptoms. The nausea was of much too active a character to have arisen solely from diabetes. It was very different from that noticed by Dr. Watt;* nor can the picturesque words of Aretæus be made to include such a state. "Diabetics," he says, "are of embarrassed minds and nauseated stomachs;" ἀπόροι ἀσώδεες†, but that does not mean actual vomiting. The absence of febrile symptoms, loaded tongue, hot skin, &c. should not have diverted suspicion from local inflammation. It is nothing more than is usually the case in uncomplicated meningitis, as is familiar to many, or, to quote one printed authority, is noticed by M. Andral in all the examples of that complaint where other affections did not justify their presence.‡

1, Hill Street, Berkeley Square,
October, 1846.

OBSERVATIONS ON THE DISEASES OF CHILDREN.

By James Milman Coley, M.D.

Licentiate of the Royal College of Physicians, and Physician to the Western Dispensary.

Cholera.

During the autumnal months cholera is generally prevalent, in consequence of the remarkable vicissitudes of temperature observable at this season; the variation between the meridian heat, and the comparative coldness of the evening, being greater than at any other part of the year. In the course of the present autumn other diseases obviously arising from changes in the state and temperature of the atmosphere, as dysentery and diarrhœa, have also been very general, especially amongst the children in the metropolis, who in many parts of it are exposed to the constant inhalation of morbific animal effluvia, in addition to the malaria adjacent to their habitations, and the causes I have mentioned. The principal symptoms of cholera are the same in children as in adults; viz. great abdominal distension, followed by vomiting, purging, and pain in the epigastric region, accompanied with involuntary spasmodic action of some of the muscles, and sudden collapse of the vital functions, terminating in some instances in speedy death. The discharges which occur at the commencement of the attack are often bilious, but those which succeed consist of serum, are of a pale colour, resembling gruel or rice-water in appearance, and emit an unpleasant animal odour. The latter evacuations are essential, being the product of a congested and afterwards of an inflamed condition of the mucous coat of the duodenum and upper portion of the ileum. The bilious discharges are accidental, and dependent only on the presence of such bile as may happen to lodge in the gall-bladder, and be disgorged by the violent contractions of the abdominal muscles during the act of vomiting. On opening the body of a child who died after a few days' illness with cholera, I found the gall-bladder empty, and no bile either in the stomach or intestines. Yet, notwithstanding this fact, which any pathologist may demonstrate, and the sound view entertained and expressed by Sydenham, who nearly 200 years ago considered the discharges to consist of "vitiated humours," most modern writers have represented it as arising from an excess of bile produced by the excitement of the liver, or by fruit or other indigestible food. This prejudice and spurious pathology prevailed in Sydenham's time, and were fully exposed by that enlightened physician, who satisfactorily explained the wide difference between an accidental surfeit and the more serious disease produced by an epidemic malaria. The first effect of exposure of the surface of the body in the autumn to a comparatively cold and moist atmosphere, impregnated with the gaseous products of animal and vegetable decomposition prevailing at that season, is a sudden collapse in the capillary circulation in the skin, manifested by chilliness and a contracted state of the whole surface, and occasioned by a diminished supply of blood and nervous energy on the periphery of the body. This interruption to the generation of animal heat, and to the perfect circulation of the blood in the extreme vessels in the external parts of the body, is followed by a corresponding congestion in the terminating arterial ramifications, which, in a state of health, are designed to convey to the villi of the intestinal mucous membrane only the colourless portions of the blood, and are *invisible* even with the aid of an ordinary microscope. In consequence of this sudden loss of balance between the circulation and excitability of the cutaneous and the intestinal mucous membranes, and the subsequent congested state of the minute vessels of the latter, those of the liver partake of the general plethora affecting the chylopoietic viscera, and suspend their proper function: for the appropriate secretion of every organ is interrupted by congestion, which is a preliminary state of inflammation. Hence, instead of an increased secretion of bile, we shall find an entire suspension of that process, until the symptoms of cholera have been removed. In proportion as the congested vessels of the mucous coat of the intestines relieve themselves by a copious effusion of serum from its free surface, the abdomen becomes full and tense. At length, the acrimony of the serous effusion producing violent and unnatural contraction in the fibrous coat of the intestines, severe pain commences, which is succeeded by copious discharge of serum from the stomach and bowels; and the transition of the acrid serum along the villous coat excites through the excito-motory nerves, which ramify on its surface, certain muscles into involuntary and painful contraction. Hence, we observe cramps in the muscles of the lower extremities and in those which envelop the thorax and abdomen. The comparative acuteness of perception existing in the mucous coat of the alimentary canal of infants renders its nervous fibrils more sensitive than those of adults. Hence, in the former, we generally meet with convulsions, and sometimes a secondary disease in the brain, the nature of which I intend to notice and explain in a future essay. The morbid appearances discovered on dissection in children are similar to those found in adults; namely, a congested or inflamed state of the mucous coat in the upper portion of the small intestines, and patches of softening of that membrane of a round or oval figure. When the disease is not vigorously attacked at the commencement, and the congested state of the vessels of the villous coat is permitted to proceed to inflammation, fever of the nature of typhus succeeds. This I have found one of the causes of typhus among the children of the metropolis during the present season.

---

* *Medical Observations and Enquiries*, Vol. 5.

† *Vide Rollo on Diabetes*, p. 252.

* Watt on Diabetes: case of J. C.

† Περὶ Χρονίων Παθῶν, Lib. II. cap. 2.

‡ Clinique Médicale, Tom. v. p. 208.

Treatment. — When the medical practitioner is in attendance at the beginning of the attack, and the symptoms are mild, the treatment adopted by Sydenham under such circumstances is the most proper, namely, the frequent potation of chicken-broth or barley-water for the purpose of diluting the acrid serum. Medical aid is often not solicited until the patient has become exhausted by violent pain, vomiting and purging, and a dangerous collapse is present or approaching. In this state all further evacuations by the stomach and bowels must be carefully prevented by the exhibition of five, ten, or fifteen minims of tincture of opium, which may be repeated if the pain should not subside at the end of an hour. Nothing else should be administered internally until the anodyne effect of the opium has been produced, after which, if a state of collapse should continue, denoted by a cold skin, feeble and fluttering pulse, and a constant sensation of fainting, a little warm wine and water, or brandy and water, may be given, frequently with the best effect, until, with the assistance of artificial warmth externally applied, the natural temperature, and the circulation in the skin, have been restored. On the following day a small dose of rhubarb and magnesia should be prescribed, and if dysentery should succeed in consequence of the inflammatory action having extended to the mucous coat of the colon or the lower portion of the ilium, that disease should be treated, as soon as reaction takes place, in the same manner as if it had not been preceded by, or complicated with, cholera. This is the treatment which I have found the most successful during the present epidemic.

47, Chester Square, Oct. 17, 1846.

INJECTIONS OF QUASSIA TO REMOVE INTESTINAL WORMS.

M. Schultze speaks in praise of quassia amara used in the form of injection, for removing ascarides from the intestines, when their presence causes violent pruritus ani. He prepares each injection with four drachms of the quassia, to about four ounces of fluid, and he states that such a solution will invariably procure the expulsion of a large quantity of these entozoa.—*Gazette des Hospitaux, 26 Sept.* 1846.

CASE OF

DESTRUCTIVE INFLAMMATION OF THE EYE,

AFTER PHLEBITIS CONSEQUENT ON AMPUTATION: WITH REMARKS.

By W. Bowman, Esq.

Assistant-Surgeon to the King's College and Royal London Ophthalmic Hospitals.

Early in August, in consequence of Mr. Simon's absence from town, I assumed the care of a young man, whose leg he had amputated about ten days previously, on account of disease of the ankle and tarsus.

The case was going on unfavourably: there had been a shivering fit on the fifth day from the amputation, followed by decisive symptoms of inflammation of the veins of the stump, advancing even above the groin. He was already in a state of high irritative fever, with a sallow and exhausted countenance; and on the 5th he was attacked with diarrhœa, which required starch and opiate enemata, with small doses of gray powder and Dover's powder. This symptom soon ceased, but bed-sores were appearing, and he had repeated rigors, with parched tongue, very rapid pulse, a hot skin, and an anxious and sunken look, which indicated serious internal disease. The stump itself was meanwhile assuming a more healthy action, and the ligatures had separated; yet there was some projection of the bone in spite of our efforts to prevent it.

On the morning of the 6th he complained of his left eye smarting and aching, and it appeared to be affected with slight catarrhal ophthalmia. There was superficial redness, with mucous discharge. Alum lotion was applied.

On the following day the inflammation had increased with frightful rapidity; there was excessive florid chemosis, partly concealing the cornea; the lids were turgid, and the eye wanted none of the characters of a severe attack of purulent ophthalmia, except the purulent discharge. The pain in the globe was of an aching darting kind. The cornea remained clear, but the aqueous humour and iris were muddy, and sight was totally lost. The hemosed membrane was scarified, and our leeches were applied, which had he effect of speedily reducing the carlet colour of the conjunctiva to a ale yellowish-pink tint, and the chenosis became of that sort which is nown as "serous." This speedy hange was accelerated by his weakned state, and shewed that active depletion was inadmissible. Fomentaions were then applied. The general reatment was continued, with an piate at bed-time.

On the 8th dull pain in the eye coninued, and the chemosis had increased nd projected between the lids, but was ale and serous. The cornea had beome cloudy, the chambers were yelowish, the iris obscured by lymph, the upil occupied by a yellow mass of ymph, which looked like an opaque ens. The lids had become less œdenatous, so that the condition of the nterior of the organ could be more xactly noted. Meanwhile the local ymptoms of phlebitis in the stump vere on the decline, and the stump ssumed a more healthy aspect, the ones still protruding slightly. But he rigors now recurred daily, with onsiderable regularity, attended with nuch exhaustion; and about the 15th e was seized with pleurisy of the right ide, for which he was blistered, and ook a grain of calomel with opium very four hours for two days. At the nd of this period the pain in the side ad nearly subsided, and (what is ineresting) the lymph was absorbed rom the iris and the pupil, which resumed very nearly their natural appearance, the latter only remaining ather turbid. He had lost almost all ain in the organ, and the morbid acion within it seemed entirely checked. Some pale chemosis remained, but the ornea was clear, and the globe wore o appearance of internal suppuration. All pain in the organ had likewise eased.

On the 20th he died, after an aggraation of the symptoms betokening nternal phlebitic abscesses.

I examined the eye before twentyour hours had elapsed, and had appointed an hour for the inspection of he rest of the body; but this was unfortunately prevented by the interference of the friends.

The following is the result of a careful and deliberate examination of the eye itself.

The *iris*, seen through the transparent cornea, was clear green, without lymph on its surface, but firmly adherent by its entire posterior surface to the capsule of the lens, which presented only a partial opacity near its centre. This posterior synechia and opacity of the capsule appeared of old standing (and the patient had stated that this eye had been a poor one, and vision imperfect with it for many years).

The *lens* itself was *perfectly transparent.*

Under one of the recti, immediately behind its insertion, the sclerotic (and also the choroid) was much bulged, and so distended as to be almost giving way, evidently by pressure from within. It formed what would have been termed, from its shape and circumscribed figure, a staphyloma scleroticæ. In order to ascertain its nature, I carefully cut all round it through the sclerotica only, and in detaching this coat I found that it was extremely thin, and its fibres as it were unravelled, at the apex, where also the choroid was adherent to it by a film of recent lymph, and, like the sclerotica, distended from within. The outer surface of the choroid was perfectly natural, except at the apex of the swelling. On now cutting through the choroid, a whey-like fluid, with particles of lymph floating in it, escaped in abundance; and I found that this effused fluid was filled with nucleated and other irregular granules, hanging together in little masses, and resembling lymph rather than pus. In this turbid fluid there lay loosely a great number of smooth, round, or oval beads of soft yellow lymph, of every size up to that of a rape-seed, and these consisted of an agglomeration of nucleated lymph-particles, with many shapeless granules in the connecting material. Scarcely any fibres could be discovered. I emptied the cavity between the choroid and retina, in which this effusion had collected, by syringing it under water, and the inner surface of the choroid then exhibited a coating of yellow lymph, which appeared to be deposited not merely on the surface, but also in the interstices of the capillary network which lies under the epithelium forming that surface,—almost all trace of this epithelium (the "membrane of the black pigment" of Mr. Wharton Jones) being lost. The vitreous humour, in its enveloping hyaloid membrane, together with the broken remains of the retina, had been thrown by the effusion to the central part of the globe, where they occupied only about half their natural space. The retina was not at all coated with lymph, and its capillary network was perfect, but the nervous substance was in a great measure destroyed, as though macerated; yet what remained exhibited the characteristic elements of the nervous substance of that part. In particular, I discovered several well-marked examples of the caudate nerve-vesicles, which I had never before unequivocally seen in that membrane, although strongly suspecting their existence. Jacob's membrane was nowhere visible.

The hyaloid capsule (that homogeneous glassy membrane which forms the outer covering of the vitreous humour, and in the adult eye shuts it off, as the capsule does the lens, from the capillary blood-vessels of surrounding parts, and constitutes it a non-vascular texture)—the hyaloid texture was every where entire, but thrown into innumerable minute folds, in consequence of its collapsed form. A good many lymph-globules were accumulated on its exterior in certain parts, and the nuclei naturally present on its inner surface were very distinctly visible. But what I wish specially to notice was the state of the vitreous humour itself. This highly delicate structure, from its transparency and exquisite texture, displayed with remarkable clearness the morbid changes that had been taking place within it. In a state of health the vitreous body presents no corpuscles, and only in certain parts can even that fibrous web which forms its basis be accurately seen. Such parts are specially the neighbourhood of the ciliary processes, and the border and posterior surface of the lens, where this tissue is strong, and is implanted in the capsule of the lens to aid in maintaining it in position. Now every part of the vitreous humour was here turbid and cloudy, from a finely granular and amorphous deposit in its fibrous meshes. This deposit might be supposed to be a simple coagulation of albuminous matter; no trace of organization could be detected in it. But, in addition to this, there were disseminated through the vitreous humour innumerable nucleated cells, like those of the lymph already described. These nucleated particles were much more numerous immediately within the hyaloid capsule, in the superficial portions of the vitreous humour, than towards its centre, where they very gradually ceased. They were all distinct from one another, placed apart in the vitreous tissue, and had every where the same appearance and size. Mingled with them, however, were several smaller, more granular, and irregular particles, which might be in process of development. I could perceive no appearance indicating a multiplication of the particles by splitting or division. In the central part of the vitreous tumor there were none of the nucleated particles, but in the neighbourhood of the optic foramen and yellow spot, and particularly within the ciliary processes of the vitreous (or the zone of Zinn), at the border of the lens, and near its posterior surface, they were so abundant as to render the vitreous humour perfectly opaque and yellow: yet even here they only differed in number from those found elsewhere.

Remarks.—In this case the death was consequent on phlebitis and secondary inflammation, and probably suppuration of the viscera. The course of the symptoms, and especially the attack on the eye, render this as certain as can be, in the absence of an examination of the internal organs. By a reference to the recorded cases of destructive inflammation of the eye in such circumstances, their course will be found very variable, both in duration and severity. In some the eye has gone rapidly into general suppuration and discharge of the contents of the globe; in others, the organ has retained its figure, and the inflammation has been checked, after it has destroyed the integrity of the most important tissues.

The place at which the globe gives way under a distending force from within is well illustrated here. By exact examination it will be found that the sclerotica is thinner immediately behind and under cover of the insertion of the tendons of the recti than at any other points, these tendons grooving the fibrous coat slightly before their actual insertion into it. The bulge of this tunic was precisely at one of these weak points in the present case; and I believe it will be generally found that suppuration of the globe (not a consequence of conjunctival or corneal inflammation) will discharge itself in a similar situation. I have heard of the sclerotica being opened at this point by incautious use of the scissors in the operation for strabismus.

The principal seat of the effusion of lymph in this case is very interesting to notice, if we bear in mind that the choroid membrane, from which it seems to have proceeded, has its capillaries on its inner surface, its arteries, and especially its ample veins, on its outer surface. The effusion was on the inner surface, and clearly from the capillaries: the arteries and veins forming the outer surface were quite healthy; there was not a particle of lymph about them except when the tunics were giving way.

The deposit was of lymph—of lymph consisting of little else than nucleated cells, which formed masses of rounded form, floating in a turbid serum. It may be supposed that those which had been formed from the surface of the ris under the mercurial action were of a similar kind.

The capillaries of the retina, and he nervous tissue of the retina, though o some extent macerated and disorganized by the contact and pressure of the effusion within the choroid, yet did not appear to have any lymph adhering to them, or to have themelves exuded any.

The presence of the nucleated lymph-particles in the tissue of the vitreous humour within the homogeneous hyaloid membrane which separates the vitreous humor from the contiguous capillaries, eems to me a fact of great importance o the question of the source and mode of formation of such effusions. The opinion that pus is absorbed from suppurating surfaces and carried by the blood-vessels to distant organs, and here deposited anew, is one which, however it may seem, at a cursory glance, to explain the phenomena of "secondary depositions," yet will hardly bear a rigorous scrutiny. How can pus- or lymph-globules be absorbed by vessels which certainly have no open mouths? And how, admitting such globules to be in circulation in these cases, could they get out of the capillaries, and find their road, as here, through a homogeneous membrane such as the hyaloid, into the interior of the vitreous humour? The anatomical conditions here present seem demonstrative that these nucleated cells, lymph-corpuscles, or exudation particles, were formed at the spots at which they were found, from effusion strictly fluid, through the capillary wall, the hyaloid membrane, and the vitreous tissue. It is interesting to observe that their relative numbers were far greater in those parts of the vitreous humour where it may be presumed that the ordinary processes of nutrition are carried on the most actively, and especially between the ciliary processes and the lens.

We see, in this instance of the morbid products of inflammation occurring in a non-vascular part, decisive proof of the possibility of real inflammation arising in that class of structures without their having vessels, and without their becoming vascular; and we find proof, also, of the subordinate or ministerial part which the blood-vessels play in inflammation—of their being, in reality, the channels only of the supply of that fluid, a certain change in the constitution of which forms the essential condition of the process. But of course where large masses of vascular tissues are inflamed the blood-vessels must share largely in the production of the resultant phenomena.

STRUCTURE OF HEPATIC CELLS.

M. Natalis Guillot says that the microscopic particles so abundantly found in the liver, and which have been hitherto described as hepatic cells, have nothing in their growth or structure which can entitle them to be regarded as cells. They have not been proved to go through the ordinary phases of cell-development, or to be derived from a parent-cell. And in their structure they are not hollow, or filled with any liquid (?), neither are they surrounded by any membrane.—*Comptes Rendus*, 7 Sept. 1846.

ON THE

CHARACTERS OF THE BLOOD

AS IT EXISTS IN THE VARIOUS PERIODS OF UTERO-GESTATION.

By William Camps, M.D.

Physician to the Farringdon General Dispensary.

In some former papers on the Blood, which appeared in the London Medical Gazette during the last and the present years, I treated of that important fluid of the human body, in its pathological characters as it exists in the various diseases then under consideration. Although, in the course of the present paper, I will shew from many authorities that during utero-gestation the blood has at times, or during some periods of that process, though not in all, a chemical constitution widely different from that which is regarded as the normal and physiological condition of this fluid, yet, since utero-gestation is not to be considered as a disease, but as a healthy physiological process peculiar to the female, it would be manifestly incorrect to speak of the pathological characters of the blood in a state in which disease is not present, however closely, in some of its characters, it may be proved to approximate to those of the same fluid in many well-marked diseases, as, for example, in the acute Phlegmasiæ.

From the analyses of all observers, it is evident that pregnancy exerts considerable influence on the composition of the blood. M. Andral states that, from the first month of pregnancy to the end of the sixth, the proportion of the fibrine of the blood is constantly below its normal standard.

The mean proportion of the fibrine during the six former months, according to him, was 2·5; the minimum proportion was 1·9; and its maximum proportion only 2·9, whilst, during the three latter months of pregnancy, the mean proportion of the fibrine of the blood reached above the mean normal or physiological proportion, being 4·0, and its maximum proportion was as high as 4·8, or nearly 5·0. Dr. Simon, in his "Chemistry of Man," has given an analysis of the blood of a pregnant woman drawn before the sixth month of pregnancy, where it is stated the blood formed a slight buffy coat but with this exception it did not differ in its physical proportions from healthy normal blood, although the analysis shewed that the amount of solid constituents of the blood was somewhat below the physiological proportion.

The figures of this analysis, with which I do not now trouble the reader, may be seen by reference to Dr. Day's translation of Simon's work. This analysis agrees with what Andral states—that it is only after the sixth month of pregnancy that the blood becomes so rich in fibrine. The same remark will apply to the analyses made by Becquerel and Rodier, who have examined the blood of nine pregnant women: namely, one at the fourth month, five at the fifth month one at five months and a half, one at the sixth month, and one at the seventh month of utero-gestation. The maxima, mean, and minima results of these nine analyses are, so far as relates to the fibrine, represented respectively by the figures 4·0, 3·5, and 2·5; and, as relates to the blood corpuscles, by the figures 127·1, 111·8, and 87·7. In these nine analyses it is to be observed, that the blood was taken in six of them before the sixth month of pregnancy, at which time the blood has not become rich in fibrine, which circumstance will explain why the relative proportion of the fibrine is not so high as that mentioned by Andral. He and M. Gavarret have analysed the blood of thirty-four pregnant women, and have observed that the increase of the fibrine is greatest in the last month of pregnancy. The mean proportion at this period is stated to be 4·3, the fibrine reaching its maximum at the period of parturition; and it may be presumed that this proportion is maintained, even if be not increased, during a short period after the expulsion of the fœtus. This presumption is supported by results obtained by these two observers with M. Delafond, on analysing the blood of sheep and of cows during utero-gestation and after parturition. Indeed, after parturition, the blood of these animals yielded, on analysis, more fibrine than before it. See a memoir published by them "On the Composition of the Blood in some Domestic Animals."

Having already spoken of the pre-portion of the fibrine of the blood in reference to the cases just mentioned, let us see what is stated of the proportion of the blood-corpuscles. In the one case, where the blood was analysed by D. Simon, which I have already said was in the fifth month of pregnancy, the proportion of the blood-corpuscles was below the normal standard, the quotation being only 96·900. In the cases analysed by Becquerel and Rodier, the maxima, minima, and mean proportions of the blood-corpuscles were respectively 127·1, 87·7, and 111·8, as before quoted.

In the thirty-four cases analysed by MM. Andral and Gavarret, they found that in thirty-two of these the blood-corpuscles were below the physiological proportion, varying in six cases from 125·0 to 120·0; and in twenty-six cases they diminished successively from 120·0 to 95·0. In one of the thirty-four cases the blood-corpuscles existed exactly in their normal proportion. This was in a woman pregnant only from one to two months.

In another of the thirty-four cases, in which the subject was at the end of the second month of pregnancy, the proportion of the blood-corpuscles was above the normal standard, being 145·0, whilst the fibrine was only 2·8. This was the only instance in thirty-four cases in which the blood-corpuscles were in excess.

It becomes an interesting subject of inquiry, both to the physiologist and to the pathologist, how and why, in a state or condition of the female evidently not one of disease, but of health, the blood—without exception the most important fluid of the body—should, on the one hand, by an almost constant diminution in the proportion of the blood-corpuscles, present a state analogous to anæmia, and, on the other hand, by an almost constant increase in the proportion of the fibrine, at the latter months of utero-gestation at least, present a state closely resembling that observed in the acute Phlegmasiæ.

This last fact, namely, the excess of fibrine observed in the blood just before and after parturition, will explain to us in some measure the tendency to the occurrence of very violent inflammations in one or more organs, as the peritoneum, the uterus, or some of its appendages, at that time, demanding the free abstraction of blood by means of the lancet, and the prompt and energetic application of other therapeutic agents, indicated by the recognised existence of such excessive local and constitutional morbid action.

50, Green Street, Grosvenor Square,
October 19th, 1846.

HYGIENE OF PERSONS PREDISPOSED TO CHRONIC DISEASE, AND PARTICULARLY TO PHTHISIS PULMONALIS. BY M. FOURCAULT.

The patient is to be freely exposed to the light and air; is to take sufficient and active exercise; to keep the skin clean and transpirable, &c. M. F. eloquently sets forth the advantages of physical education, and advocates (what has been much neglected) the utility and advantage of selecting a trade or profession suited to the constitution.

"Every man of a lymphatic constitution, and in consequence unfit for labours occupying his whole time, should take moderate gardening exercise. When a fatal hereditariness predisposes him to pulmonary consumption, he will fly from towns, and devote himself to hunting, riding, or agriculture. If poor, he should enter the marine. If rich, travel a part of his life; if a landowner, he should be a farmer in climates where the air is dry, and on elevated ground, where it is freely in motion. It cannot be too strongly recommended that gardening is among the indispensable employments in hospitals, schools, orphan houses, and penitentiaries.

The life of a soldier is not suited to persons predisposed to phthisis, for the military services render that disease prevalent among the soldiers, and particularly the infantry. Prudence and foresight consequently forbid the admission into the ranks of the army of young men, the sons of phthisical parents, or of those born in damp localities, or marshy plains; or of mechanics taken from cold and unhealthy work-shops. It has been observed, that a great number of the Flemish weavers enlisted into the Belgian army die of pulmonary phthisis. There can be no question that these different classes of recruits would escape from this dangerous influence if they were entered for sea-service. This destination would be an immense benefit to themselves individually, and a considerable saving to the country.—*British and Foreign Medical Review.*

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY.

On Monday last, Oct. 26th, Dr. Smith, late Senior-Physician to the Leeds Public Dispensary, was elected to the vacant office of Physician to the above Institution.

MEDICAL GAZETTE.

FRIDAY, OCT. 30, 1846.

Our attention has been called to a somewhat anomalous plan upon which it is proposed to appoint a house-surgeon to an infirmary in the North of England. It will be best understood from the following advertisement, which we take from a provincial paper, in reference to a meeting of the Governors of an infirmary at Newcastle-upon-Tyne.

> "By the statutes for the government of this charity, every candidate for this office must be free from the burthen of a family, and leave with the house-committee testimonials of having *regularly studied* medicine, anatomy, and surgery, and of being acquainted with the general mode of hospital practice.

From other advertisements in the same paper, we gather that there are two candidates—one who is qualified by possessing the diplomas of the Royal College of Surgeons and Society of Apothecaries, and another who appears to have no qualification at all. From the above advertisement we find that no other testimonial is required from a candidate than that of having "*regularly (?) studied*" medicine, anatomy, surgery, &c. Governors of infirmaries are of course at liberty to make their own rules, and to act upon them; but we must strongly question the propriety of their taking upon themselves to decide an election for house-surgeon by what they denominate "testimonials of having regularly studied, &c." If this mode of appointment is to be adopted, what inducement will there be for a young man to go through an expensive hospital education in order to obtain diplomas as a test of his ability to practise? Such *diplomas*, however defective may be the mode in which they ar granted, are the only document which the non-professional po the public can at present rely dence not only of "regular stu of the possession of a legal qu tion.

We do not pretend to gi opinion of the respective merits two candidates. The unqualifi be perchance as competent to t formance of the duties of the o he who possesses a diploma. I appear, from one of the advertis that the former has acted fo years as honorary resident as and therefore comes forward kind of personal claim upon th vernors, strengthened, as it see the following strongly-expresse tificate signed by the four phy and four surgeons of the Institut

> "*To the Governors of the Ne Infirmary.*
>
> "We, the undersigned phys and surgeons of your Institutio to commend Mr. ———, fo very humane and diligent man which he has, for several m performed the duties of House-Su and being perfectly satisfied o great respectability of his cha and *the sufficiency of his abiliti* most earnestly desire that you reward his exemplary attentio electing him to that important o

Nevertheless, the principle of recommending an unqualified p is, in our judgment, decidedly vi and if carried out in other hosp and infirmary—appointments it be most injurious to the profe Appointments of this kind are compared with the number of fied applicants. They are gen sought as an introduction to tice; and the fact that a p ence is in almost all cases on these occasions to one who h merely "regularly studied," but undergone a regular examination, rates, we believe, as a strong inducement to a large number of students to procure, as an object of meritorious ambition, the diploma of the Royal College of Surgeons. No one is entitled to complain of the preference thus commonly bestowed upon the qualified candidate; because, if an individual has "regularly studied his profession," he need not fear an examination. It is, however, well known to be much easier to procure certificates of regular study than to obtain a diploma.

The Governors of this Infirmary may be disposed to look with favour upon one who has served them without remuneration for several years, and the medical officers of the institution may honestly feel perfectly satisfied with the character and abilities of the unqualified candidate; but by throwing open the election to possessors of certificates of study, however well informed the candidate may be in this instance, they are setting a bad precedent to the governors of all other hospitals and infirmaries in the kingdom. They are indeed breaking down the only barrier by which quacks and unlicensed pretenders can be kept out of such institutions.

Any one of the surgeons who has signed the certificate in this instance would probably have felt himself aggrieved and unjustly treated, if, at the period of his election, the governors of the infirmary had allowed him to have, as a competitor, one who did not possess a College diploma: and yet we are unable to perceive any difference in the abstract merits of the question, in the two cases: for in our judgment the office of House-Surgeon in a large Provincial Infirmary is not only of an entirely different kind, but involves much greater responsibility than that of a dresser to a metropolitan hospital. The latter is placed to learn, and is under constant supervision: the former should be already master of his profession, and able to cope with emergencies. His office is also universally regarded as the preliminary step to that of full surgeon. It should therefore, in our judgment, be laid down as a positive rule in all hospitals and infirmaries, that no individual, whatever may be his personal claims, should be allowed to be a candidate for the office of House-Surgeon, unless he has previously qualified himself by obtaining the diploma of a Royal College of Surgeons. With this wholesome restriction, while the respectability of the profession would be maintained by the appointment of a professional man, there would never be the least difficulty in finding candidates for the office in any infirmary between Berwick upon Tweed and the Land's End.

We are glad to find, from a Newcastle journal which reached us after the above remarks were in type, that the regulations of the Infirmary require from the candidate for the office of House-Surgeon a diploma of a Royal College of Surgeons, and the license of the Society of Apothecaries. It appears that, by some unfortunate accident, a notice to this effect had been omitted from the advertisement upon which we have commented, and, by some strange mistake, the objectionable advertisement here precedes that which nullifies it. As our remarks, however, are intended to have a general application in reference to Infirmary appointments, we allow them to stand.

We have elsewhere* inserted a letter from a correspondent on Medical Officers to Benefit Societies, and the mode in which they are paid for their services. He feels and expresses an honest indignation that any men should be found belonging to a respectable profession, who are ready to degrade themselves and it by this alliance with Medical Subscription Clubs of the very lowest class. Of a truth, medical practitioners are their own enemies in giving encouragement to this practice; and the remedy lies to a certain extent with themselves. The remarks made by the writer of the letter, simply confirm what we believe is now a pretty general opinion, namely, that the medical profession is overstocked, and that many of those who belong to it are unable to live by the honourable discharge of their duties towards each other and the public. Hence, they do not hesitate to resort to the most humiliating schemes in order to keep themselves from starvation. The only principle by which they appear to be guided is that of observing to the letter, the old Roman maxim, "*Si rectè bene, si non,—quocunque modo rem.*" Such conduct as that described by our correspondent is certainly not met with among clergymen or lawyers; but it is necessary to bear in mind that it requires considerably less capital to enter the medical, than any other profession. It is, we fear, hopeless to look for any improvement, so long as the manufacture of medical practitioners is carried on at so cheap a rate as it is at the present time. The prospect of impending starvation, induces many of those who have once entered the profession to resort to the most discreditable practices in order to procure patients. When men are struggling for the bare means of living, it would be a Utopian notion to expect that they should be guided in their conduct to each other by the rules of medical ethics: hence, our correspondent is only detailing the common results of over-production. No Medical Reform Bill can prevent the continuance of the evil, unless it require of a candidate for a medical diploma, a much higher standard of education than that which now passes current. At present it is a struggle among certain schools to manufacture physicians, surgeons, and apothecaries, upon the very lowest terms. Even the advertisements savour of commercial dealings: thus, we are told, instead of a school opening, that "the business of this establishment will commence," &c. We only wonder that the parties de not add, what is the plain truth, "Medical practitioners made at a ruinous sacrifice;" "The noted cheapest establishment in the kingdom for apothecaries," &c. We do not hesitate to say that some of these schools would be without a single pupil except for the tempting bait of a low fee, publicly notified as being about *half* the usual expense of a medical education! According to some of these announcements, a man may be made an apothecary, including his provincial diploma, for about *fifty pounds!* or, he may be qualified (!) (*i. e.* ground) for becoming a physician or surgeon, including diploma, for about *seventy pounds.* The same person would, however, have some difficulty in qualifying himself as a clergyman or lawyer upon these very easy terms: and when the investment of capital for acquiring a right to practise medicine and surgery, is so remarkably moderate,—"Lodge officers," who take from two to four shillings per head per annum from the members of Benefit Societies, may probably consider that this, although the starvation point,—the absolute zero of practice for other practitioners, is no bad return for the money which *they* have invested! A man who procures his license at about "*half* the usual expense of a medical education," can look with a more placid and contented eye upon the few stray shillings and sixpences annually derived from the pockets of the

---

* Page 776.

ers of these societies and clubs,
le who has incurred the *usual*
e in the study of his profession.
degrading system would not be
ted in the law, but the practice
common in medicine as to be
upon without shame, or the
st attempt at suppression by
who have in their hands the
l of the education of the profes-

HE PRESENCE OF COPPER AND RSENIC IN ALL ORES OF IRON.

ALCHNER, who has been for many
engaged in analysing minerals, and
lly the ores of iron, has found that
o metals, copper and arsenic, which
y detrimental to the good qualities of
re invariably found mixed with the
this metal. United with the oxydes
, in small quantity, they are found in
mines of this metal; and they some-
occur in such large proportions that
mines are almost useless for the pro-
n of iron. The presence of copper
rsenic may be shown by passing a
t of sulphuretted hydrogen gas
h a solution of the ore in hydro-
acid, until the perchloride of iron
lved into protochloride, and until the
is so saturated with the gas, that it
ns it largely in solution after it has
ept for some hours in a stoppered
, and the precipitate which forms in it
ompletely settled down. This preci-
, when well washed and submitted to
dinary tests for copper and arsenic,
the presence of these metals in the
unequivocal manner. He has also
ned many of the mineral waters which
n iron, and in all of them he has
clear traces of both copper and
c. These two metals, however, exist
ch small proportions that they can
no injurious effects in the ordinary
f drinking the waters. He thinks it
probable even that some of the good
on diseases produced by these waters
e due to one or other, or both, of these
s. In some of the ores arsenic exists
form of arsenious acid, combined with
eroxide of iron, forming a sub-arsenate
is quite insolublein water. It results,
fore, that both copper and arsenic are
iversally spread over the earth as is
Moreover, he has shewn that these
netals exist in meteoric iron; having
ined meteoric stones from various parts
e world.—*Comptes Rendus*, 21 Sept.

Reviews.

On the Nerves of the Uterus. By THOMAS SNOW BECK, Esq. Surgeon. From the Philosophical Transactions. Part II., for 1846. 4to. pp. 22. London: R. and J. E. Taylor. 1846.

MOST of our readers are probably acquainted with the views entertained by Dr. Robert Lee respecting the condition of the uterine nerves during the period of gestation. The subject, which is in itself one of extreme difficulty, requiring for its elucidation the performance of most elaborate dissections, and the employment of the utmost care in distinguishing the true nervous matter from the fibrous structure with which it is here everywhere commingled, has recently given rise to very lengthened discussions,—one set of anatomists declaring with Dr. Lee that the nerves of the impregnated uterus become enlarged in proportion to the increased bulk of that organ, and that such augmentation of its nervous development is essential to its functions during its gravid state; the other party denying that such nervous increase would at all assist any of the functions of the pregnant matrix, and maintaining that, under all circumstances of health, the nervous filaments and ganglia distributed to the organ remain perfectly unchanged in size. The only anatomists on either side who appear to have fully derived their views from careful dissection, are Dr. Lee, and the author of this essay. Mr. Beck states that, in 1843, he commenced the dissection of the uterus of a woman who died from uterine hæmorrhage immediately after delivery, with a view of confirming the views of Dr. R. Lee, but found so many points at variance with that gentleman's published statements, the nerves appearing to him to be so small, considering the size of the organ, that it appeared very doubtful whether or not they had increased in size during pregnancy. He also mentions, that "in the progress of his dissections he found that the structure considered by Dr. Lee as the 'hypogastric or utero-cervical ganglion' was a mass of dense fibro-cellular tissue enveloping several small ganglia, and a nervous plexus, formed at the junction of the lateral hypogastric plexus with branches from the sacral nerves; that the 'vesical ganglia' were also a mass of fibro-cellular tissue, in about the centre of which were situated small ganglia: and that the remaining structures described as ganglia and plexuses were not nervous structures." In order to arrive at a correct conclusion with regard to the relative size of the nerves, it was of course indispensable to make a comparison between the nerves of the unimpregnated and the gravid uterus, and, therefore, in the following year, the author commenced a dissection of the nerves of the unimpregnated uterus and of the neighbouring organs. The gravid uterus which Mr. Beck had dissected was that of a woman about thirty-five years of age, and of middle stature; and, to obviate as much as possible any objection that might be raised on the ground of individual peculiarity, the organ selected for the second dissection was that of a woman about the same age and stature as the former, and who had also borne children. Mr. Beck adds, that "the comparison thus made clearly showed that the nerves had undergone no change of size during pregnancy, nor of position, except such as resulted from the enlargement of the organ over which they were distributed." The author then proceeds to give a description of the principal distributions of the sympathetic nerves, from the splanchnic nerve and semilunar ganglion downwards. The following is his account of the nerves proper to the uterus:—

"*Nerves of the unimpregnated uterus.*—The nerves which compose the hypogastric plexus, on approaching the neck of the uterus, begin to separate, having larger spaces between them, and on a level with the os uteri they are joined by the branches" [described in a previous page] "which accompany the superior hæmorrhoidal artery. This expansion appears to be only the spreading out of the posterior portion of the hypogastric, and not of the anterior portion; for the latter, after being joined by the branches which accompany the iliac arteries, passes directly onwards by the broad ligament, and supplies the lower half of the uterus. These nerves, or, it may be said, these continuations from the anterior part of the lateral hypogastric plexus, pass *towards* the uterus, and, mixing with the *arteries of* this part, go on in company with them for some part of their course, but as they approach the body of the organ they separate, and each pursues a separate distribution. As the nerves approach the uterus they lose the plexiform character, and form a number of delicate branches, which pass on as distinct fine cords, dividing and subdividing, but not uniting with each other. For the supply of the middle part of the uterus a distinct branch comes from the inferior aortic plexus, and, running down by the side of the pelvis, receives no communication from the hypogastric, but passes directly to the superior part of the body of the uterus. It there divides, supplying the portion between the insertion of the fallopian tubes and the termination of the pervious branches. It also sends a branch to the ovary. The fundus of the uterus, or the portion above the fallopian tubes, is sometimes supplied by a branch from the nerves furnished to the ovaries, as seen in the dissection of the gravid uterus. Distinct from these nerves is another set, which comes from the same continuation of the hypogastric plexus, but assumes a plexiform arrangement round the vessels, and has the distinctive character of forming minute ganglia here and there. These nerves are so minute that a special dissection is required to determine their ultimate distribution, although their arrangement would lead to the inference that they were especially destined for the vessels."

Before the nerves were cleared from their neurilema the author frequently met with what appeared to be nervous branches distributed to the arteries, but further examination proved that, in every instance, these were minute vessels passing from the artery to the nerve to ramify in its neurilema.

"The fallopian tube is supplied by a branch which passes off from the anterior border of the hypogastric plexus a little above the level of the os uteri, and, entering the broad ligament, receives two branches from the nerves between the bladder and uterus. It then passes up to supply the fallopian tube. The branches derived from the nerves between the bladder and uterus were accidentally divided in an early part of the dissection; hence I am unable to speak decidedly from what source they came. That they were branches of augmentation and not of division is shown by the trunk of the nerve being enlarged after each junction.

"*The nerves of the gravid uterus.*—After the description of the nerves of the unimpregnated uterus, it is only necessary to mention that the nerves of the gravid uterus follow the same course and distribution in all material respects. They, how-even differ in two slight points. 1st. In consequence of the increased size of the parts, the pelvic plexus and the inferior part of the hypogastric plexus are extended over a larger surface, which allows their arrangement to be more readily determined. The continuation of the hypogastric plexus, which supplies the uterus, is seen to approach the side of that organ in company with the vessels, and afterwards to leave them, some of the branches passing to the anterior and some to the posterior surface, both of which finally enter into its substance. 2dly. The course taken by the nerve which supplies the middle portion of the uterus appears to be different in the two dissections. This, however, is more apparent than real, for the nerve passes off from the hypogastric plexus high up in the pelvis, and, coming down in company with it, interchanges some filaments. On reaching the neck of the uterus it enters the organ, and, passing up in a distinct tendinous canal, immediately beneath the surface, neither receives nor gives any branches until it reaches the portion a little below the insertion of the fallopian tubes; where the tendinous canal ceases, and the nerve divides into two branches, one supplying the anterior and the other the posterior surface. The anterior branch, the larger of the two, after entering deeply into the substance of the uterus, again approaches the surface at the insertion of the fallopian tube, and apparently sends some filaments to it; but whether this is the case or not I am unable to decide, as the nerve was accidentally divided."

Mr. Beck found that in these two dissections the size of the nerves was essentially the same; and when the nerves are compared, he considers that "no doubt is left that the nerves of the gravid uterus have undergone no change in size; nor any change in position, except that consequent upon the development of the organ."

Towards the end of his paper the author lays down the following conclusions, deduced from his previous statements:—

"1. That the uterus receives its nerves from the hypogastric plexus. It ought, however, to be mentioned, that some have considered, on physiological grounds, that small branches derived from the sacral nerves, after their union with the pelvic plexus, might reach the neck of the uterus by a circuitous route; but this appears contrary to anatomical evidence.

"2. That the ovaries are supplied by branches derived from the renal or aortic plexuses.

"3. That the fallopian *tubes are supplied* from the hypogastric and aortic plexuses, though it is probable they also receive some branches from the nerves of the superior part of the bladder.

"4. That the bladder and vagina are supplied by branches from the pelvic plexus, which contain a large amount of tubular nervous fibres derived from the sacral nerves.

"5. That the rectum also receives its nerves from the pelvic plexus, but they, on the contrary, contain a small amount of tubular fibres.

"6. That the nerves undergo no change during a second pregnancy.

"7. That it is probable the vessels do not decrease in size after parturition, but are only contracted in their cavity."

Mr. Beck elsewhere remarks, that, when the vessels of the uterus are divided transversely, they present a wavy outline at the inner border of the section, and, when opened longitudinally, the inner surface presents a number of folds, resembling the rugæ of the internal surface of the stomach or bladder when contracted.

The paper is illustrated by some very beautiful engravings of Mr. Beck's preparations. The descriptions appended to the plates are very full, and to these we refer the anatomical reader for an account of the minute ramifications of the nerves as observed by the author.

It is very evident that the anatomical question now pending between Dr. Lee and Mr. Beck is one which cannot be decided by any arguments that can be adduced in the present stage of the inquiry, or even by an examination and comparison of the two sets of preparations. If both of these gentlemen are absolutely certain that their own views, as derived from a careful examination of the parts, are perfectly correct, are founded upon no fallacy, the appearances which they have observed being constantly present in every uterus similarly circumstanced, then their part in the task of demonstration has been accomplished, and the question must remain for the decision of subsequent inquirers, who will doubtless in the course of a few years set the matter perfectly at rest, by their concurrent testimony upon one side or the other. At present, the question lies open to be decided by dissection, not by argument. There are, however, several points in which it appears to us that the evidence adduced by Mr.

Beck decidedly fails to afford absolute proof of his main conclusions. It will be observed that he has drawn his deductions only from observing the respective conditions of the nerves of two uteri, the one from a person who died shortly after delivery, the other from a female, who, although not pregnant at the time of her death, had borne children; the author has evidently seen that a source of fallacy exists in this comparison, and indirectly admits that some change may take place in the nerves at the first pregnancy: this being allowed his comparison remains altogether defective, for it is easy to conceive that, providing the nerves do become considerably enlarged while the uterus is in its gravid state, they might in great measure retain their augmented bulk for some years subsequently to delivery, or for the remainder of the individual's life; hence, the uterine nerves of a female who had borne many children might be, at all times, equal in development to those of a pregnant woman of the same age. The author, however, adds in a note that "he has recently had an opportunity of making a cursory examination of the nerves of a virgin uterus, and finds they do not differ in size from the nerves of the gravid uterus previously described." We must venture to suggest, that the result of a *cursory examination* is scarcely sufficient to supply the place of a defect which certainly vitiates the evidence afforded by the whole of the remaining portion of this paper: we also regret that in this hasty note (p. 222), the author has neglected to mention whether the stature and age of the female from whom this last uterus was removed corresponded with the age and height of the other two females—whether the virgin uterus and its appendages were perfectly of the normal size, and free from disease; whether the history of the individual shewed that the catamenial functions had not been subject to any remarkable irregularity during the latter years of her life; and, lastly, whether death occurred within a day or two of the menstrual period, points which, it will be perceived, are of considerable moment, and which it is absolutely necessary to settle before choosing any uterus as a fit specimen for the desired comparison, as it is evident that, providing the uterine nerves ever do become increased in size, their bulk may very probably be liable to augmentation from other causes of vascular determination than that of impregnation. We are not certain of the fact, but we believe that at all events in the earlier period of his investigation, Dr. Lee formed his opinions from the dissection of the uteri from women who died undelivered: the subject dissected by Mr. Beck died of hæmorrhage subsequent to delivery: it might possibly be argued by those who consider that when the uterus ceases to be pregnant its nerves gradually regain their original size, that the specimen chosen by Mr. Beck did not fairly represent the typical condition of the nerves of the gravid uterus. At all events, in future dissections of this kind, it would be desirable to choose the uteri of females who had died undelivered at, or shortly before, the full period. We also observe that Mr. Beck began his dissection of the recently pregnant uterus early in the year 1843, but did not commence the examination of the unimpregnated uterus until the following year, at a period when a twelvemonth's immersion of his first dissection in spirit or other preservative fluid had most probably caused no small degree of shrinking in the preparation: a comparison therefore between this and a comparatively recent specimen could scarcely be fairly instituted. In future examinations it would be right to compare specimens which had been dissected at the same time—as, for instance, by the investigator and one of his pupils: in this manner another source of fallacy might be avoided. It also appears to us that, by the admission that the nerves of the impregnated uterus are fully as large as those of the organ in its unimpregnated state, Mr. Beck in reality supports his opponent's doctrine—that these nerves receive an increased development during pregnancy; for it is evident that, providing the slender branches which supply the narrow surface of the unimpregnated uterus were to become stretched over the enormous superficies which the gravid organ presents at the full term of pregnancy, they would, if unchanged in structure, appear attenuated to an extreme degree: the very fact of the long nerves in the one case being as thick as the short nerves in the other, appears to us to be sufficient proof that the former must have undergone increased development.

We trust that, ere long, this interesting question will be taken up in a practical manner, and thoroughly examined by several of our best anatomists. The task is one which must entail considerable labour, but we think it is also one which English anatomists are bound to decide.

Liebig's Physiology applied in the Treatment of Functional Derangement and Organic Disease: with Observations upon Hahnemann's Practice. Part 1: *The Heart, Lungs, Stomach, Glands, Joints, Bones, &c.: with Cases, showing the Advantages of Modern Science over former Methods in the Treatment of Disease.* By JOHN LEESON, Practitioner of Medicine, &c. 8vo. pp. 219. Renshaw, London. 1846.

THAT one who desires to become the reformer of any long-established system must possess qualifications of a very superior order to fit him for his task, is an axiom which has occurred to all who have been at the pains to investigate the history either of men or of sciences. The task of overthrowing opinions which have been handed down from generation to generation as sound and confirmed principles, can only be achieved by one who is able to take up that moral vantage-ground which superior reason, judgment, temper, knowledge, and principle, confer upon their possessor. There have doubtless been a few exceptions to this rule, both in religion and in politics; but, in science, it has always been, and will ever continue to be, immutable. The strong arguments of a furious zealot have been known to amend the religion of nations; and history presents instances of governments overthrown by the impetuosity of daring enthusiasts: but reason alone can subvert the established doctrines of a science; and here the man who, in attempting to argue down the prevailing errors of his contemporaries, fails to present himself with evidences of irreproachable good faith, of freedom from that kind of prejudice against which he presumes to inveigh, and the possession of a knowledge vastly superior to that ignorance which he undertakes to dispel, and who does not, upon the whole, display a degree of mental capacity which is evidently sufficient to fit him to become the victor in a momentous argumentative struggle,—in fact enters the contest with the signs of defeat written upon his front. The futile efforts of weak and unworthy advocates have done more to retard the establishment of truth than have the strongest attacks of truth's most determined opponents.

It may be considered that the above remarks are far too serious to be applied in the criticism of a work written mainly for the purpose of convincing the non-medical public that nearly every one of the preparations contained in the London Pharmacopœia are either useless or injurious, and that the whole of the medical men who continue to employ these formulæ are incompetent blockheads; but we cannot help feeling regret when we meet with incapacity combined with injustice and illiberality, and, considering that, even in an opponent, it is painful to observe feeble argument and strong prejudice wholly unredeemed by kindly and ingenuous sentiments. We do not think it worth while to undertake the unprofitable task of unravelling the tangled web of arguments and assertions which Mr. Leeson has been at the pains of weaving together in the work before us. A few extracts from its pages, and an occasional comment, must suffice to convince our readers of its character.

The author states in his preface that he offers this treatise to the profession and the *public* [the italics are ours], and very strongly insists on the fact that twenty-five years have elapsed since he entered into practice.

Passing over a few of the preliminary pages, we find the author writing as follows:—

"There are about *four hundred and ten preparations* in the Pharmacopœia of the Royal College of Physicians, which, no doubt, are considered by that learned body useful for medical purposes, or else they would not have been retained there. It is from this collection of preparations that the medical youths of this country are instructed to cull their remedies, and apply them in the treatment of every form of disease. Now any medical man of ten or twenty years' standing must have found that *four hundred of these preparations* are of little or no value whatever in the treatment of any form of disease; and that about the remaining ten might have assisted him in reducing, at one time or other, cases occurring in every department of his practice. Nearly all the waters, confections, decoctions, extracts, infusions, liquors, mixtures [the author excepts from his denunciation 'the brandy and egg mixture,' but whether in satire or in approval the obscurity of his style does not enable us to determine], essential oils, spirits, tinctures, have little or no influence over any form of disease when used as internal or external remedies. Many of the mineral preparations are absolutely injurious in their effects under every circumstance, while the retention of other remedies is burlesque and nonsense. Why, then, divert the mind of the student by compelling him to study the natural history," &c. * * * "of such a farrago of worthlessness, while the higher and most philosophical walks of medical science are entirely kept from his grasp? Now this system must be adopted either by design or ignorance: if by the former, the persons to whom the legislature have entrusted their confidence should be discharged from their several appointments, with fine or imprisonment; or, if from the latter, be discharged as incompetent." (pp. 10—11.)

We could pass over this wild tirade, notwithstanding the hint which it is intended to convey, that the author is a far more judicious prescriber than were the whole of the learned censors who have given the various editions of the Pharmacopœia to the profession, and an infinitely more astute person than any of the host of deluded practitioners who still continue to employ the denounced formulæ; but the author does not pause here: his spirit of reform will not be appeased until nearly the whole of the medicinal substances, in which the majority of practitioners place their greatest trust, are swept from the Materia Medica; affirming that "aluminum, antimony, silver, arsenic, barium," (this substance seems to have been thrown into the list by the author merely as a make-weight), "bismuth, calcium, copper, iron, mercury, iodine, magnesia, lead, potassium, sodium, zinc, are, 'most of them, *if not all*,' abandoned by every practitioner of standing and experience as the most dangerous applications for any kind of medical purposes." (pp. 12—13.)

We are not willing to employ a direct contradiction, even in commenting upon the most unfounded assumptions, and therefore we shall make no remarks upon the assertion that most, if not all, of these remedies have been abandoned by every experienced practitioner; but the fact that he recommends the use of tartarized antimony in croup and bronchitis, and of "mercurial treatment" in "spasmodic croup," must certainly be taken as an evidence that the author does not presume to range himself among the "practitioners of standing and experience."

In his preliminary chapter, the author does not advance any tangible plan in exchange for the present system of medical treatment, unless we are to attach any importance to his hints that "Hahnemann might have been considered a great modern improver in the art of constitutional treatment, had he not surrounded his do-nothing system with the most extravagant absurdities, and had he not left acute inflammatory disease to the risk of homœopathic treatment," (by which observation we presume the author means to infer that, with the exception of inflammatory affections, all diseases should be managed upon a do-nothing system); and his intimation that the circumstances of the lives of Old Parr, Jenkins, and certain other ancients, "would afford ample field for contemplating the means by which mankind might obtain a full end and term of human existence;"—facts which we fear are monopolized by the vendors of certain patent medicines who might chance to complain of plagiarism did the profession attempt to employ those secrets for their patients' benefit. In the subsequent portions of his work, however, the author reveals the plans of treatment which he proposes in lieu of the pharmacopœial system at present in use. His curative measures certainly possess the virtue of simplicity. It appears that, in the majority of acute cases, he employs bleeding, emetics, purgatives, the warm bath, and "starving;" a system which he has certainly not adopted in pursuance of any of the Baron Liebig's doctrines; while, in the majority of the chronic diseases spoken of in this volume, he relies mainly upon the employment of a pure milk diet, with the use of underdone meat, vegetables, porter, and quinine—a plan which is somewhat more in accordance with the new chemico-physiological theories. We do not wish it to be understood that the author recommends precisely the same routine of treatment in the whole of the above classes of cases; and it is but fair to state that, in several of the instances which he narrates, his treatment appears to have been judicious, and worthy of imitation. Some of his remarks on blood-letting are also not without value: still, we think that he recommends the employment of this measure far more frequently than can be considered admissible; and we are altogether at a loss to understand why such simple measures as these should be made the basis of at least one full-sized octavo, and be put forth as the great results of the new and popular physiological doctrines, to the exclusion of a system of therapeutics which continues, and we trust will long continue, to be taught in nearly the whole of the medical schools of Europe. We shall now quote a few more passages from the work, as conclusive evidence that our condemnation of its general style is by no means undeserved.

The following is a specimen of the author's observation:—

> "The effects of diarrhœa are sometimes truly awful. An attack of but a few minutes will often change the voice into a whispering sound, as in cholera; in a few minutes more the body is a skeleton; and, upon a little further extension of time, death is inevitable." (pp. 147—8.)

Taking the above facts for granted, it might readily be conceived that, in very extreme cases of this kind, the body should, "in a few minutes more," become completely resolved into its elements, and "vanish entirely into thin air," leaving not the slightest vestige of organic substance for cadaveric inspection.

A specimen of the author's mode of imparting information to "the profession and the public:"—

> "It cannot be strictly said that when we do not use for our food the flesh of animals, that we do not live upon animal food diet. Eggs, milk, cheese, butter, fats, fishes, fish-oils, vegetable-oils, are all made up of animal matter, except the latter, and this is analogous to animal fats, and have the same effect as they have when submitted to the action of the digestive functions, except in their not giving off so much feculent matter—a material absolutely necessary to be largely blended with our food, in order to keep up the peristaltic action of the alimentary canal." (p. 43.)

The refinement of the author's care in warning his readers that, in eating butter, eggs, fats, and fishes, they are not adhering strictly to a vegetable diet, is only equalled by the apparent coarseness of his physiological suggestion of the necessity that our food should be largely blended with feculent matter. We are certain that so unpleasant a theory never emanated from the laboratory at Giessen. These, however, are mere blunders. The following passages deserve unqualied reprehension for their gross illiberality:—

> "The operation of laryngotomy or tracheotomy in either way is easily performed in every instance, although much has been said by some operators upon the great difficulties and dangers which are represented as always surrounding it. These obstacles, I presume, are made by themselves either in their lectures or in their writings, and succeed in deterring many practitioners from performing them, so that the credit or honour in doing them might be carefully reserved for themselves. This system applies to most other of the operations in surgery." (pp. 94—5).

We did intend to place before our readers, even more fully than we have already done, the blemishes with which this work is so conspicuously fraught, the vagueness of its statements, the shallowness and frequently the glaring inaccuracy of its assumed facts, and the infinite errors of its style; but the disgust excited by the transcription of the above passage—which we do not hesitate to characterise as one of the most unjust attacks that any practitioner has ever dared to make upon the character of his brother surgeons—has spared our readers the continuation of so unpleasant a detail.

It has ever been our wish to render our critical articles expositions of the useful points of the works submitted to review, rather than of their errors and deficiencies; and we have always felt unwilling to expose the mistakes of industrious and well-intentioned writers, whose abilities have not proved altogether equal to the literary tasks which their laudable ambition has led them to undertake: but we shall never refrain from the expression of just censure towards those who attempt to conceal their own ignorance by unfairly impeaching the judgment of others, and who seek to ingratiate themselves with the public by ungenerous attacks upon their professional brethren.

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, October 26th.

MR. DENDY, PRESIDENT.

MR. HIRD related the following case of

Rupture of the Bladder from External Violence.

Stephen W——, aged 36, a bricklayer, on the 14th August, after having been drinking with some friends at a public-house in Kennington, was knocked down and run over by a gentleman driving his cab. He was taken to the house of a surgeon in Lambeth, who dressed a slight wound on the head. After this he walked home to Pimlico, a distance of nearly two miles, and at the request of the gentleman who ran over him, Mr. Hird saw him at eleven o'clock the same evening, about three hours after the accident. He found him in bed, complaining of severe pain in the hypogastric region; but having drank to excess, he was unable to give an account of his sensations at the time of the accident. He had vomited two or three times, felt great desire to pass water, but not more than two or three table-spoonfuls had dribbled away, which was slightly tinged with blood. He was cold, shivered occasionally, and was covered with a clammy perspiration; the pulse feeble and 120 in the minute. The abdomen was distended, but did not evince, on examination, the circumscribed form observable in cases of distended bladder from retention. Mr. Hird introduced a full-sized silver catheter into the bladder; the urethra was perfectly healthy, but not more than two or three table-spoonfuls of urine flowed. The bladder was contracted, and greatly opposed the moving of the catheter. On examining the rectum, which was not attended with much pain, he could distinctly feel a large swelling between the bladder and that intestine, which yielded to pressure, and again resumed its original size and form on the pressure being withdrawn. He withdrew the silver catheter, and introduced an elastic one, which was left in the bladder. Five grains of calomel and one of opium, in the form of two pills, were given immediately, and a draught of the sulphate of magnesia and infusion of roses an hour after. He took also an effervescing draught with a drop of hydrocyanic acid every three hours.

Aug. 15th, 8 A.M.—Passed a restless night. He withdrew the catheter shortly after Mr. Hird left him, and made frequent attempts to pass urine, but without success, not more than a table-spoonful passing after violent straining. He experienced great pain about the umbilicus, and in the perinæum, on every attempt to empty the bladder. Complains of thirst and headache, and has vomited twice during the night; skin dry, and hotter than natural; tongue furred; pulse 120; abdomen tense, and extremely painful on pressure; countenance expressive of great anxiety; bowels have not been opened. On introducing an elastic catheter of large size into the bladder, a very little urine flowed, but upon passing the finger into the rectum, and moving the instrument about a little, about two wine-glassfuls of high-coloured urine, tinged with blood, flowed slowly through the instrument. Ordered twenty leeches to be applied to the abdomen, and to have two grains of calomel and half a grain of opium every three hours, and a simple saline draught every three or four hours. The catheter left in the bladder.—6 P.M.: Has been in great pain the whole day; the abdomen is exceedingly tense, and will not bear the slightest pressure; frequent disposition to pass urine, which occasions extreme pain in the lower part of the abdomen and perinæum; a very small quantity has dribbled away through the catheter since the morning; bowels have acted twice; pulse 130. To continue the calomel and opium, and the saline medicine. Fomentations to the abdomen. Catheter left in the bladder.

16th, 8 A.M.—Slept a little at intervals during the early part of the night, but was violent and excited early this morning. He complains of headache, constant desire to void urine, and tenesmus; skin dry; tongue furred; pulse 140. To take a grain of calome, and half a grain of opium every three hours. To continue the saline medicine, and to have an enema of gruel and castor-oil.—5 P.M.: Is a good deal excited; pulse 140. Not more than a table-spoonful of urine passed since the morning.

17th.—Passed a restless night. Vomiting and hiccough commenced about six o'clock this morning. He became comatose, and died between seven and eight this evening.

Post-mortem examination.—On opening the abdomen, the upper contents appeared healthy; the small intestines were coated with lymph, also that portion of peritonæum covering parts of the bladder and rectum. In the recto-vesical cul-de-sac there was more than a pint of dark-coloured urine: the bladder was small and contracted, with an oblique fissure, an inch and a half long, in the posterior inferior part, which opened into the peritonæal cavity; the mucous membrane of the bladder was full and healthy, and slightly everted at the aperture. The abdomen alone was examined.

In some remarks on this case Mr. Hird

observed that he was unacquainted with any authentic case of recovery after rupture of the bladder into the peritoneal sac. In this case the period which the patient survived the injury was short, only three days having elapsed from the accident to its fatal termination. He referred to a case recorded by Dr. Harrisson, in which a patient, after the injury, lived eight or nine days, and walked on two or three occasions for some distance. Except a desire to make water, he complained of little pain until two or three days before death. His appetite was unaffected. These accidents usually occurred to men in the middle period of life. Why was this? In boys the bladder was more an abdominal than a pelvic viscus, and the boy retained water less time than the adult. In women the pelvis was larger, and the posterior part of the bladder pressed against the uterus; whereas in the male there was no resisting body between the bladder and the promontory of the sacrum. These were amongst other reasons why the bladder in the male should be more liable to rupture from external violence. He explained the reason why it ruptured generally at that portion covered with peritonæum by the fact that, whilst the other coats yielded more readily, the peritonæal offered a resisting point, was split by the blow against the sacrum; the other coats then gave way; the urine escapes, and peritonitis and its results ensue.

Mr. Dendy inquired if Mr. Hilton was acquainted with a case lately seen by Mr. Key, in consultation with Mr. Childecott, at Dorking, in which there was little doubt that the bladder had been ruptured, and recovery had followed?

Mr. Hilton believed that Mr. Key had felt no doubt that, in the case referred to, the bladder had been ruptured, that effusion had taken place into the peritonæum, the patient recovered, and had been again the subject of a second attack, attended by the same symptoms, and recovery again took place. He had seen several cases, in which, after rupture of the bladder, and the escape of its contents into the peritonæum, in which the patients had lived periods varying from three to ten days. One reason why the bladder gave way posteriorly, more readily than at other parts, probably arose from its having at that part longitudinal fibres, which, when the bladder was distended, became separated, and more easily ruptured.

Mr. Linnegar inquired whether it would not have been good practice to puncture the cul-de-sac, anterior to the rectum, and evacuate the contents.

In the discussion which ensued, the points of practice discussed had reference to this point. It was generally *admitted, that* although many surgeons would conside it good practice to make such puncture, I the sheet-anchor of the surgeon, in these cases, was large doses of opium.

PATHOLOGICAL SOCIETY OF LONDON.

Oct. 20th, 1846.

Dr. C. J. B. Williams, President.

This was the first meeting of the new Society. The rooms (No. 21, Regent Street,) were crowded. Among the gentlemen present we noticed Drs. Copland, Babington, Clendinning, Bence Jones, Roget, Owen Rees, Barlow, Bennett, Ramsbotham, Lever, Hughes, Golding Bird, Johnson, Peacock; Messrs. Arnott, Liston, Benjamin Phillips, Partridge, Mackmurdo, Kingdon, Hilton, Simon, Cock, Hewett, Fuller, Crisp, Critchett, Dalrymple, Poland, Busk, &c.

The President opened the proceedings with the following address:—

Gentlemen, — In opening the public proceedings of the Pathological Society London, in this first year of its existence, cannot but feel the painful disproportion between the vastness and importance of t objects which are contemplated in its formation and my power to do them due justice But the obvious merits of our cause set aside all personal considerations, and confiding in their own greatness and strength, rather than in my feeble advocacy of them on this occasion, I beg to submit to your attention a few remarks on the uses and difficulties of the study of pathology, and the modes in which the proceedings of this Society are calculated to advance it.

That practical medicine, as a science and as an art, is a most intricate and difficult subject, will be admitted by all who have conscientiously engaged in its pursuit,—from the zealous student, who, when he leaves the comparatively easy and pleasant paths of the introductory sciences, struggles in the thickets of the practical department, to the veteran practitioner, who, after much toil and disappointment in trying to thread the labyrinth, has been compelled to work his way by some short cut of empirical routine.

That practical medicine is unsatisfactory, as well difficult, is obvious, not only from the notorious popularity of empiricism, in any new and attractive form, but also from the avowed scepticism of many who stand high in the profession, and, I lament to add, from the desertion from its ranks of some few estimable men into the erratic bands of homœopathy, hydropathy, mesmerism, or some such specious chimera.

It would detain you too long were I to go through all the steps of the argument, by which, as I think, it may be proved that one, if not the great reason, why the study of medicine is so difficult and so unsatisfactory, is because it has hitherto been taught and treated too metaphysically,—too much by closet speculation,—too much by book description, mystified, or cramped, as this often is, by a vague or Procrustean phraseology, derived from ages in which it would be vain to expect language commensurate with the advanced knowledge of the present day. Too little has been done by physical demonstration — too little by appeals to the senses — too little by direct observation and experiment — too little by habits of that careful and accurate investigation of phenomena, to which, alone, nature discloses her truths. Hence, the knowledge obtained by the student is of that abstract kind that helps him little at the bedside of the patient. It has not upon it the stamp of nature; he finds much more or much less than what he expects from the description of others, and his senses are unpractised to discern for himself. Herefrom arise confusion, vacillation, and failure in practice; and, distrusting all scientific medicine, he either falls into a narrow routine of empiricism, or becomes a ready advocate for any partial hypothesis which applies some universal remedy, or easy line of treatment, to all diseases.

We want, then, the means of rendering the study and science of medicine more personal and practical, more a subject of individual observation and demonstration; and for this end, we look, first, to clinical medicine, and, guided by the experience and applied skill of former observers, our understanding enlightened by the standard truths of anatomy and physiology, our senses sharpened and aided by all that optics, acoustics, hydraulics, mechanics, and chemistry, can do for us, we examine signs and symptoms, and make ourselves acquainted with disease in the living body. But our research stops not here: we pursue disease even to the field of its triumph in death; and there, in the sad havoc which the destroyer has made in the organisation, we find out the mode of his warfare, trace out his weapons and plans of attack, and thus prepared, seek for means of counteracting them in due time.

Such appears to be the proper method of study; but we soon find new difficulties in carrying it out. Those encountered in clinical medicine I pass by, and proceed briefly to notice the chief difficulties in the study of pathological anatomy.

One great cause of the difficulty of *mastering* morbid anatomy is its great *variety, and the* want of means to illustrate it *by demonstration*. No one questions the necessity of demonstrations and actual dissection, in order to obtain a due knowledge of healthy anatomy, and much time and labour are properly bestowed on these studies. Yet one healthy body dissected is a type of all; but it is quite different with morbid anatomy: disease and its results present infinite varieties, which yet require to be seen to be properly understood; and no one can hope to obtain a comprehensive knowledge of the anatomy of disease without witnessing post-mortem examinations for a series of years. The ordinary career of a student at a hospital enables him to see but a tithe of this extensive subject; and even hospital physicians, with years of experience, are frequently encountering something new. I have myself been at the work for a quarter of a century, and have assisted in the examination of more than two thousand bodies, yet even now, I rarely attend one without finding out something that is new and instructive. How little chance is there, then, for practitioners in general to become conversant with this most instructive branch of medical science, with their scanty opportunities, reduced, too, as they are, by want of time and inclination for the pursuit, and by the difficulties arising from popular prejudice!

Now, to remove these difficulties, to open an extended field, and to promote zeal in its cultivation, we propose to proceed on the plan of co-operation and concentration. By making this Society a medium of exhibition of morbid specimens, and by our meeting here to examine and discuss them, we create a school of pathological anatomy, where those demonstrations which are elsewhere wanting may be carried on, and where every member of the Society is given an advantage beyond even that of any one hospital physician; for here we expect to receive contributions from all the hospitals in the metropolis, to cull the fruit from each pathological field, besides collecting many a stray floweret from private practice, which, but for us, might "blush unseen."

But I will trespass on your patience by endeavouring to explain further the chief objects which we hope to accomplish by this Society.

1. The exhibition and description of morbid specimens, recent, preserved, or represented by drawings or models, not excepting even those that are common, provided they are sufficiently well marked to be fit for demonstration.

2. The critical examination of unusual specimens sent to the Society for reference. A Sub-committee has already been appointed for this purpose of some members of the council much experienced in morbid anatomy, and who will report to the Society on any specimens transmitted to them.

e classification and simultaneous
ı of series of specimens, with the
lustrate the progress or varieties of
structures.

ı comparison of like preparations
erent museums with the view to
discrepancies, and to establish
y of arrangement and nomen-

direct the attention of morbid
s to particular subjects of interest,
romote pathological researches by
c observations and experiments.

ects of exhibition illustrative of
, in the living body, whether cases
e, or microscopic appearances of
lerived from them, will fall within
ıce of the Society.

serve, gentlemen, we do nothing
n appeal to the senses, by specimen,
n, drawing, or model; and this is
he distinguishing features of the
We can admit no abstract argu-
. or discussion. The communica-
:o be confined to a description of
to be exhibited, with such a brief
may serve to explain its patho-
ırings; and the remarks of mem-
visitors must be restricted to the
cs. Our subjects must speak for
s, and require neither long papers
speeches. If members differ in
rs, let them argue, not by mere
t by specimens, and we shall all
cted, if not convinced, by the
; and in this multiplication of
ı will be the best chance of attain-
ıth.

:ended, through the co-operation of
ole Secretaries, to keep an accurate
the proceedings of the Society, and
the most valuable communications
ected by the Council for publication
nsactions of the Society.

angements of our meetings are not
ively settled; but it is intended
me for public communication and
shall be from eight till nine, or a
r; afterwards, the meeting will
self into a conversazione, which
members opportunities of more
amining, and conversing on, the
, for which we have spacious tables
lent light, and microscopes and
ıments will come to our aid.

ıen, gentlemen, are the chief aims
:s of the Pathological Society of
and I trust that they commend
ı to you as both feasible and
hope that it will appear that we
fringing on ground already occu-
there is abundance of material
ıtruding on the wide domain of
, diagnosis, prognosis, and treatment; but proper pathology, and its groundwork—morbid anatomy, are its legitimate and fertile field. We hope to cultivate these, not only directly, in the communications, but indirectly, by spreading abroad a knowledge of morbid anatomy,—by fostering zeal in its pursuit,—by raising up a class of intelligent cultivators. We expect that more bodies will be opened; and not only so, but, when opened, better opened, and better understood.

I need not tell you, gentlemen, that the utility and instructiveness of post-mortem inspections depend on the care and candour with which they are conducted. Permit me to trespass on your patience with two anecdotes in illustration:—

A friend of mine, zealous in the pursuit of morbid anatomy, endeavoured in vain to excite a kindred spirit in the practitioners of the neighbourhood in which he had just settled. One answered him: "What is the good of opening bodies?—it is never satisfactory; we never find what we expected."

Another case was the converse of this. Having watched with great interest a remarkable case of pulmonary disease, I was very anxious to know the result of the post-mortem examination, which was conducted before I arrived. I was told that the only disease found was enlargement of the heart, which, being all that the physician expected, he was satisfied, and looked no further. As I expected more, I had the body re-opened, and found, what I expected, extensive consolidation of the lung. So far I was satisfied also. But, searching further, I found more than I expected, in a general dilatation of the bronchial tubes; and this was the case in which I first discovered the connection of that lesion with pleuro-pneumonia. This, although unexpected, was still more satisfactory.

And herein lies the value of morbid anatomy, if pursued with a single eye searching for truth: it brings the diagnosis and pathology of the practitioner to a tribunal from which there is no appeal; it detects error; it establishes sound views; and it extends the boundaries of knowledge.

Indeed, it is no small stigma on the profession in London that no association ha been hitherto formed for the cultivation o that branch of knowledge; that, while Paris, Dublin, and even many of the provincial towns of the kingdom, have their pathological societies, active, and working much good in their spheres, the metropolis of this great country, the great emporium, not more of fashion, wealth, trade, and commerce, than of life, disease, and death, with a population, living and dying, of nearly two millions, should have no institution to make their study that science which regards the change and decay of the body to which these millions are all, sooner or later, tending.

Gentlemen, it is for us to remove this stigma; and permit me to congratulate you on the array of high talent and attainments comprised in the body who compose your Vice-Presidents, Council, and Secretaries. With such a combination of zeal and ability to direct our proceedings, and with your cordial support and contributions, we shall be sure to succeed in so good a cause. For myself, I have only to crave your indulgence in my attempt to perform the duties of the highly honourable office to which the too favourable opinion of the Council has kindly promoted me. However inadequate my abilities may be to acquit myself as you have a right to expect, both my gratitude to you for conferring on me this honour, and my hearty desire to co-operate in this most instructive pursuit, will excite me to exert them to the utmost.

Mr. **Liston** exhibited a specimen of

Stricture of the Œsophagus.

The stricture existed at the upper part of the tube, was about an inch in length, and capable only of allowing of the passage of a goose-quill: it had existed for a number of years, and there was observed considerable hypertrophy of the constrictors of the pharynx, particularly of the inferior. The upper cornua of the thyroid cartilage were so approximated as to leave but a space of five-eighths of an inch between them, being a diminution of about an inch in the length of their normal interval. The patient, who had been under the care of Cruikshank and John Hunter, lived to between 70 and 80.

Fracture of the Neck of the Femur (?).

Dr. **Peacock** introduced to the meeting sections and drawings of the head and neck of the left femur, from a patient who had been supposed to have sustained a fracture of the neck of that bone. The capsular ligament was much thicker; margin of the acetabulum thicker than usual; but the cavity natural, and the sound ligament entire. The head and great trochanter were on the same plane, the neck of the bone being much shortened behind. The head was directed more posteriorly than usual. Several firm fibrous bands extended towards the circumference of the head of the bone, and these covered in part a large, irregular, bony projection, encircling the neck, and most conspicuous in front; the bony structure atrophied, and the cancelli filled with oily matter. Portions of diseased bone extended at each side of the neck into the substance of the head from the points where the irregular bony projection was situated externally, and between these the structure more dense than elsewhere. A distinct band was traceable between the dense columns of bone at their extremities. The patient, when 79, fell from the top of a stair on his left hip. Eleven months after, he could get about with the aid of crutches. The foot, however, was slightly everted; the limb an inch shorter than the other. The age of the patient at death was not known.

Dr. **Peacock** remarked that he had much doubt as to whether the changes in the structure of the bone were to be looked upon as the result of fracture or disease. The examination of different specimens in the museums of London had failed to convince him.

Mr. **Liston** had no hesitation in regarding the specimen in question as one of interstitial disease so frequently consequent on injuries of the hip unattended with fracture.

Dr. **Peacock** also exhibited a preparation of a peculiar form of

Post-pharyngeal Abscess.

The sac of the abscess, which was the size of a small egg, was seen situated between the bodies of the upper cervical vertebræ and the back of the pharynx, not causing, however, much projection of the latter from its being flattened in front. In connexion with the anterior surface of the sac, there sprang a small cyst, forming a nipple, like prolongation into the pharynx, and completely closing the orifice of the glottis. It admitted the point of the little finger, and was freely moveable, and perfectly translucent at its extremity and sides. The preparation was from a female infant, seven months old. The child had occasionally suffered from dyspnœa for three weeks, the symptoms having been very urgent for the last three days of its life. In the intervals of the dyspnœa the respiration was natural; but the slightest exposure to cold, motion, or excitement, brought on a recurrence of the symptoms, which were attended in inspiration by a peculiar croupy sound. There was no other disease observed after death, with the exception of much mucus in the bronchi, and slight lobular condensation in the lungs. Dr. Peacock said that another child, of the same age, and of the same parents, had been brought to him suffering with symptoms similar in every respect; and that having directed the appropriate treatment on the second day of the attack, the progress of the disease was arrested.

Rupture of the Heart from Muscular Exertion.

Dr. Richard Quain exhibited drawings and specimens illustrative of the various

h sometimes occur to the left
f the heart, or to the aortic
g muscular efforts.

specimen was a heart which had
tty degeneration, and through the
ll of the left ventricle of which
d occurred during some slight
forts. He detailed the general
f the injury, and the microscopic
of the change which the texture
had undergone. He explained,
such as this the blood accumu-
e feebly acting ventricle; it
inst and prevents the effective
e aortic valves. The blood of
and that of the aorta is thus
tinuous column, which presses
e of many pounds on the surface
icle, predisposed, by the degene-
texture, to yield to this force,
then occurs. On the other
the ventricle acts vigorously,
during muscular efforts, the
the column of blood in the aorta
its valves sometimes yield, and
y injured; of four cases of this
gave the striking details. One
a smith working in a state of
with a sledge hammer, the second
who tried in a passion to force
or, the third in a man heavily
the fourth in a groom running
se. Of each case he gave the
and physical signs, the latter
y those of regurgitant disease of
alves; the post-mortem appear-
ee of the cases showed the exact
he lesion in each, and that it was
with the accident referred to.
case still lives.

rences drawn from the cases by
were—

t the aortic valves are liable to
ng muscular efforts.

this injury is not necessarily
y fatal, but that this will probably
lt in a period varying from one
s.

t the symptoms, physical signs,
ss, of this injury correspond to
e like lesion which result from

g was exhibited, from the pen of
Chambers, of the post-mortem
s found in the brain of a woman
ith symptoms of apoplexy after a
ration

tings will be resumed on Monday,
nd continued on the first and
lays in each month until the end

Correspondence.

RUPTURE OF THE TENDON OF THE RECTUS FEMORIS.

SIR,—The communication of Mr. Grantham in last week's GAZETTE has induced me to send you the following case of rupture of the tendon of the rectus femoris muscle, which occurred in my practice a few years ago. At the time it happened, I considered the case so simple, and the treatment so obvious, that I did not think it worth while to publish it. The diagnosis is very simple, because the leg cannot be extended by the natural effort of the patient, although it readily admits of it by other means. Your attention is called to the injured part, because it is the seat of pain; and, upon examining the thigh, your thumb slips into a chasm, and becomes embedded between the divided ends of the tendon:—On the 19th of October, 1842, I was sent for to Mr. S. G., a gentleman about 56 years of age, of stout muscular make, who, in walking down his garden-steps, had missed his footing, through supposing he had arrived at the bottom when he had still one step to descend, and, in the violent effort he made to prevent himself from falling, he heard a snap, accompanied with some pain, and found himself incapable of raising his right leg. On examination, I immediately discovered that he had ruptured the tendon of the rectus femoris muscle just above its insertion into and expansion over the patella, and the tendon was drawn up the thigh about an inch. The injury was accompanied with only slight swelling or local inflammation. The limb was placed on an inclined plane commonly used for fracture of the patella, and bandaged, so as to keep the ends of the tendon in approximation. A diluted spirit lotion being applied for the first few days over the knee-joint, perfect union took place, and the patient recovered the entire use of his leg in about five weeks, without having suffered from any constitutional symptoms. I considered it proper to keep my patient thus long before I allowed him to walk, in order that the new substance might acquire sufficient firmness to prevent the probability of its becoming elongated or stretched by the muscular effort and weight of the limb in extension; and I have found that the plan has answered completely, as there is not the slightest elongation of the tendon or lameness in walking.

Another case of rupture of the tendon of the rectus femoris muscle, but complicated with laceration of the capsular ligament of the knee-joint, is now under the care of an experienced surgeon on the coast of Dorsetshire.

WILLIAM HIGHMORE.

Sherborne

THE DEGRADED STATE OF THE PROFESSION—MEDICAL OFFICERS TO BENEFIT SOCIETIES.

Sir,—If you see no objection to the following remarks, perhaps you will permit them a place in your very valuable journal.

Yours very respectfully,
A Subscriber.

There never was a body of men apparently so intent on injuring each other as medical practitioners. On this occasion, I will allude to only one mode by which the profession is injured. There are few Benefit Societies which have not surgeons attached to them. These surgeons engage to attend members for sums varying from two shillings to four shillings per head, per annum. Is not this most degrading? Is it not very probable that he who receives this small pittance keeps from another practitioner, who would otherwise be called in, a large amount of practice? The medical contractor often finds, to his chagrin, many of his own private patients enrolled as members in the society which he has engaged to attend, who are glad to avail themselves of his skill at so cheap a rate.

Are the members of any other profession in the habit of following their vocations for so small a pittance as the medical? I should say no.

The abuse I have alluded to, exists nowhere to such an extent as it does in this metropolis; and in no place are the medical men so poor and degraded as they are in this city of cities. I am tolerably well able to judge in this matter, as I practised in a provincial town for many years, and not only knew the circumstances of practitioners in that place, but in several towns adjoining.

If the profession should ever obtain a satisfactory medical and surgery bill, surely the members will have their position elevated, and be prevented from under-bidding each other for the paltry situation of 'lodge doctor,' or even from seeking such a degrading appointment. Medical men are debarred from numerous enjoyments which are within the reach of those who belong to other professions; and in addition to this, they are now badly remunerated.

Prosperous as Sir Benjamin Brodie has been in his profession, yet even he says, in the introductory lecture which he gave on the 1st of October—"Do not, then, flatter yourselves with the belief that in engaging in any department of the medical profession, your way will be smooth before you—if you are unsuccessful, you will be disappointed, and will regret that you had not embarked in some other pursuit. But to be successful you must make up your minds to a life of labour, of incessant application of mind and body—you will never be able to say 'the next day, or even the next few hours, will be my own'; for the claims on your attention may occur at any time, and often will occur when it seems that you have the least right to expect them: you never can be off your guard. Then, to the anxiety which you will experience, in common with every one who looks to his own exertions for his advancement in the world, you will have superadded another and a higher kind of anxiety, such as every one must or ought to feel who is responsible for the health and lives of others, involving, as it often happens, the comfort, the happiness, and the worldly prosperity of families. Unlike some other pursuits, the medical profession offers you no political honours or distinctions."

Surely an enlightened and highly educated man should at least be adequately compensated for the sacrifices which Sir B. Brodie says he is called upon to make.

October 21, 1846.

A NEW PELVIMETER.

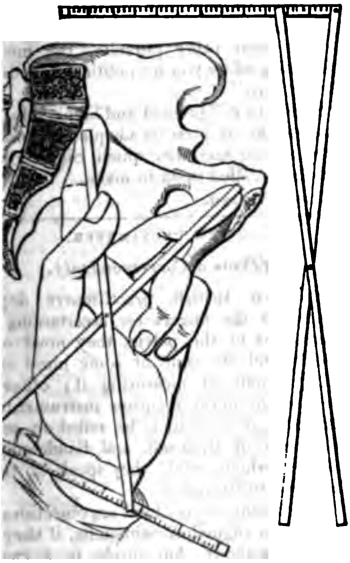
(From a Correspondent).

Although British practitioners depend chiefly on the fingers for ascertaining the dimensions of the pelvis, they must occasionally feel the want of some more satisfactory mode of measuring it; otherwise they would never mention instruments so uncouth and so little to be relied on as the pelvimeter of Coutouli, and Baudelocque's calipers, which, while they speak of them, they own to be useless.

Instruments of any kind are objectionable, I know, in vaginal examinations, if they can be done without; but surely, in a case of mollities ossium for instance, where an accurate measurement may determine between the removal of the child through the natural passages and the necessity for the Cæsarean section, their use may be sanctioned, if they be only competent to their purpose. Besides this, I believe the instrument I am going to describe may be used not only without annoyance to the patient, but without her knowing that anything besides the fingers is being introduced.

It consists of two pieces of wood, each one-eighth of an inch square, and eight inches long, fastened together in the middle by a pin, so as to form a cross with equal legs; it is, in fact, a double pair of compasses, so arranged, that, whatever distance is measured by the legs within the pelvis, an equal measure is taken by those on the outside on a scale attached to one of them.

The advantages of this instrument are—that it is practicable; it is simple in its structure, and not likely to excite the suspicions of the patient; it is easily carried about, and readily applied; it is accurate in its measurements, and it will take all the nsions of the true pelvis—the brim, y, and outlet—with equal facility, and out having to remove the fingers or the ument from the vagina until all the uring is completed; we may also ascer- the space at the brim, although the nting part of the child shall have al- y descended in some degree into it. s the examination may be made in very : more time than an ordinary one with fingers alone would require; but the lts obtained will be much more precise.



Selections from Journals.

MIDWIFERY.

THE CHARACTER OF THE BLOOD IN MALIGNANT AFFECTIONS OF THE UTERUS.

has long been a matter of uncertainty ther in cancerous disease the blood lergoes a peculiar and constant change its composition or its quality. The ject is one of considerable importance, : has latterly engaged the attention of ller, who has examined carefully both chemical composition, and the micros- ical characters of this fluid, in persons cted with carcinomatous diseases. It been recently stated by Eugel that the od in cancer undergoes a pathological nge which consists chiefly in the de- ppment of an excessive quantity of umen, whilst in tuberculous diseases the ine is the *element which is in excess* both in the blood and in the morbid material poured out. This statement, however, is in the opinion of Heller merely hypothetical, and is based on evidence furnished by no direct chemical analysis, which alone can determine the question. Heller therefore took advantage of several cases of malignant affection of the uterus and vagina, which fell under his notice, and he examined carefully the blood passed by flooding, as also portions drawn directly from the arm. Omitting the particulars of the various cases, the general results only to which his researches led him need be here stated.

His microscopical examination of the blood proved the following chief points: 1st. That the blood corpuscles in cancerous disease always present a great variety in their size, some of them being smaller than natural, and others considerably above the average size; some are even three times larger than ordinary. The smaller ones are usually finely indented, granulated, or mulberry-like; the larger ones invariably smooth. This variety in size of the blood corpuscles, though always present in the blood in cancerous disease, is not peculiar to this kind of blood, for it also occurs in blood which contains pus. 2. That when blood is examined according to the method employed for the detection of pus in it,* peculiar cells may be found in it, which correspond in form and other peculiarities to the ordinary cells of cancer. This is a fact which had not been hitherto made out, but about which there is now no doubt. 3. That in addition to the above peculiarities, there are observed by the microscope minute bodies of a more or less crystalline form, and possessed of a bright golden-yellow metallic lustre, which are most distinctly seen on darkening the field of the microscope. When viewed by transmitted light they appear in part colourless or yellowish, and in part of a bluish tint, shewing a play of colours. These peculiar glittering particles may in most cases be distinguished with the naked eye after the blood has coagulated, appearing either as golden pellicles in the clot, or as glittering particles floating in the serum.

The chemical analysis of the blood furnished results equally decided in their nature. In the first place there was observed a constant, absolute, and relative increase in the quantity of *fibrine*, both in the hæmorrhagic blood as well as in that withdrawn by venesection. The quantity of fibrine varied, and this variety was most marked in the metrorrhagic blood; sometimes in this latter the quantity amounted to as much as 13·42 parts in 1000: in one case even to 16·44 parts. In the blood drawn from a vein the quantity was always above natural, yet seldom greatly exceeded three parts in 1000. On comparing the quantity of fibrine in the blood discharged by hæmorrhage from the uterus with that in the blood drawn by venesection, it would seem as if nature was endeavouring to get rid of a portion of excessively fibrinated blood by a spontaneous discharge from the uterus of blood loaded with fibrine. The *albumen* was present in its normal quantity, or if anything rather below it, so that there are no grounds for regarding the cancerous diathesis as an albuminous one, or for considering the cancerous material as composed of albumen. The quantity of *blood corpuscles* was always very small, both in the hæmorrhagie blood as well as in that drawn from a vein. Sometimes the diminution of corpuscles was so great that complete anæmia of the body was found after death.

---

* This process is fully described in last vol. of the Medical Gazette, p. 168.

The view, therefore, that the cancerous diathesis is an albuminous one, and therefore opposed to the tuberculous diathesis, which is a fibrinous one, is completely erroneous, for the quantity of fibrine in the blood in cancerous affections is always in excess, and the diathesis therefore in such cases should be regarded as a fibrinous one, just as it is in tuberculus disease, where also an excess of fibrine (together with a diminution of red corpuscles), prevails in the blood.

This is another argument against the view of antagonism, which has been stated, though without good foundation, to exist between the cancerous and tuberculous diathesis.—*Heller's Archiv*, 1846.

PHYSIOLOGY.

DESCRIPTION OF THE ITCH CONSTITUTION.

BY DR. SIEBERT.

The itch constitution is frequently observed many years after the itch has been extirpated from the skin, without the itch disease being cured; more seldom, however, when the itch passes by metastasis into some distinct form of internal disease, than, when breaking out from time to time on the skin, it returns again to the latent state, and exhibits its peculiar phenomena in an erratic manner. I have remarked the itch constitution in many individuals, and known and treated it as such before its existence was shown by examination and inquiry, more particularly in journeymen mechanics infected in their travels, and with whom the itch had lingered for years. It was manifested by the puffed-up, swollen, plump face; the smutty eyes; the dull, silly stare; the swollen nose and lips; the latter of a sallow hue; the puffy eyelids, the general dull tint of the skin, when none of the usual complaints of vertigo, debility, indigestion, shortness of breath, lassitude, and sleepiness, had given indication of the disease. Many subsequently showed the truth of the diagnosis by an itch eruption more or less copious. Some became phthisical, others epileptic. In one case, the fits of vertigo increased in intensity, until the patient was insensible in them: these terminated by a discharge of a limpid fluid from the nostrils. In another case, death followed a remarkably acute attack of hydrothorax."—*Dr. A. Siebert's Technik der Medicinischen Diagnostik.*—*Brit. and For. Med. Review.*

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 17.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	664	Males....	441	Males....	493
Females .	623	Females .	380	Females .	475
	1287		821		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,336)	129
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	118
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	174
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	191
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	209
Total	821

CAUSES OF DEATH.

COL. A. Weekly Averages of 5 Autumns, COL. B. of 5 Years.

		A.	B.
ALL CAUSES	821	1000	968
SPECIFIED CAUSES	817	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	166		
2. Dropsy, Cancer, &c. of uncertain seat	91	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	130	151	157
4. Lungs, and other Organs of Respiration	230	313	296
5. Heart and Blood-vessels	40	29	27
6. Stomach, Liver, and other Organs of Digestion	82	79	71
7. Diseases of the Kidneys, &c...	7	8	7
Childbirth, Diseases of the Uterus, &c.	10	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	4	6	6
10. Skin, Cellular Tissue, &c.	1	2	3
11. Old Age	33	68	67
12. Violence, Privation, Cold, and Intemperance	23	27	26

'ollowing is a selection of the numbers of from the most important special cause:

all-pox	8	Convulsions	35
asles	6	Bronchitis	27
rlatina	30	Pneumonia	56
ping-cough	22	Phthisis	125
rrhoea	35	Dis. of Lungs, &c.	7
lera	2		
hus	45	Teething	3
psy	11	Dis. Stomach, &c.	10
lden deaths	4	Dis. of Liver, &c.	12
drocephalus	27	Childbirth	9
oplexy	13	Dis. of Uterus, &c.	1
alysis	18		

ARKS.—The total number of deaths was ow the autumnal and 147 below the annual e. Scarlatina and typhus appear to be y on the increase. In all the districts, the ity was below the averages.

TEOROLOGICAL SUMMARY.

Height of Barometer ....29·24
" Thermometer[a]..............47·9
gistering do.[b] ......max. 74·7 min. 30 2
1 the Thames water " 0· " 52·5

[a] From 12 observations daily. [b] Sun.

r, in inches, 2·41: sum of the daily obser- taken at 9 o'clock.

orological. — The mean temperature of k was 1° below the mean of the month The extreme hebdomadal range in the istering thermometer was 44·5°. This as chiefly remarkable for a sudden fall in rmometer of 8°, and for the large amount which fell. This was 2·41 inches, equal re than *one-tenth* of the whole *annual* ty which falls on the plains of the British (24·51 inches).

TICES TO CORRESPONDENTS.

ycock's lecture will appear in the following umber.

pers of Mr. Meade and Mr. Brown are in , and will appear next week.

rvey's paper has been received, and will early insertion.

DEMONSTRATORSHIP of NATOMY at an old-established Metropo- School of Medicine will shortly become . As the prospective advantages of the on are peculiarly great, any gentleman ghly acquainted with practical anatomy, ing to practise as a Consulting Surgeon, find this an excellent opening.—For further articulars address to Chirurgus, at Mr. ill's, Princes Street, Soho.

No letter will be attended to unless con- the name and address of the writer.

STMINSTER MEDICAL SO- IETY.—The Meetings of the Westminster al Society will recommence on Saturday, ber 7th.

Committee have engaged the Rooms, A, Sackville Street, for holding the meet- f the Society; and they trust that the improved accommodation, the holding the s weekly, and the undertaking of several rs to introduce papers for discussion, e a great additional inducement for the rs of the profession to enrol themselves rs of the Society.

EDWARD J. CHANCE, } Hon.
S. W. MERRIMAN, M.D. } Secs.

Just published, post 8vo. 7s. 6d. cloth,

THE MORAL ASPECTS of MEDICAL LIFE; containing the "Akesios" of Professor Marx, &c. By JAMES MACKNESS, M.D. Consulting Physician to the Hastings Dispensary.

London: John Churchill, Princes Street, Soho.

Now ready, with Plates, 8vo. cloth, 10s. 6d.

THE PATHOLOGY and TREATMENT of SCROFULA, being the Fothergillian Prize Essay for 1846. By ROBERT M. GLOVER, M.D., Lecturer on Materia Medica in the Newcastle Medical School.

London: John Churchill, Princes Street, Soho.

Now ready, illustrated with numerous Engravings on Wood by Bagg, fcp. 8vo. cloth,

A MANUAL of MATERIA MEDICA and THERAPEUTICS. By J. F. ROYLE, M.D. F.R.S., Professor of Materia Medica and Therapeutics in King's College, London.

London: John Churchill, Princes Street, Soho.

Now ready, in one thick 8vo. volume, the Third Edition, with considerable Additions,

PRINCIPLES of HUMAN PHYSIOLOGY. With numerous Illustrations on Steel and Wood. By W. B. CARPENTER, M.D. F.R.S.

London: John Churchill, Princes Street, Soho.

THE PHARMACEUTICAL JOURNAL for November 1. Edited by JACOB BELL.

CONTENTS.—Laboratories for Practical Instruction.—The Influence of the Spirit Duty on the Commerce of this Country.—The Limits of Pharmaceutical Education.—Conversazione at the House of the Society.—Cochineal (with Cuts).—Opuntia Cochinillifera (with Cut).—Xyloïdine, or Gun-Cotton.—Bastard Ipecacuanha.—West Indian Opium.—Detection and Prevention of Alterations in Bankers' Cheques.—Decoction Aloes Compositum.—Varieties of the Almond (with Cuts).—Leslie's Patent Gas-Burner (with Cut).—Free Acid in Sweet Spirit of Nitre.—Dr. Collier's Orange-Quinine Wine.—Pigments.—Adulteration of Drugs.—Sulphuret of Arsenic in Shell-lac.—Spurious Yellow Bark.—Death from Rat Poison.—Death from Supposed Poisoning.—Death from a Dose of Medicine—Death from Morison's Pills.—The Effects of Camphor on the Teeth—Epithem: a Substitute for Poultice—Decomposition of Water by Heat—The Cavendish Society—The Sydenham Society, &c. &c. 1s.

Published by John Churchill, Princes Street, Leicester Square. Edinburgh: Maclachlan and Stewart. Dublin: Fannin and Co.

MEDICAL SCHOOL, ST. THOMAS'S HOSPITAL.—Mr. MACKMURDO will commence the Lectures on OPHTHALMIC SURGERY, Monday, 2d November, at 7 o'clock. Dr. G. GREGORY will commence his Lectures on the EXANTHEMATA, Tuesday, 10th November, at 7 o'clock.—For particulars inquire of R. G. Whitfield, Resident Medical Officer and Secretary.

A SURGEON, who is also qualified as M.D., is desirous of entering into PARTNERSHIP, in a Practice the proceeds whereof amount to about £1000 a year. One situated in one of the southern counties would be preferred. The advertiser would expect to be taken as Assistant for a few months, at the end of which time he should be at liberty to retire, or to complete arrangements.—Address to B., at Mr. Chappell's, 84, Lombard Street, London.

ADVERTISEMENTS.

NEW WORK ON CLINICAL SURGERY.

Just published, in 8vo. 10s. 6d. cloth,

CLINICAL COLLECTIONS and OBSERVATIONS in SURGERY, made during an Attendance on the Surgical Practice of St. Bartholomew's Hospital. By W. P. ORMEROD, Fellow of the Royal College of Surgeons of England; late House-Surgeon at St. Bartholomew's Hospital.

"We have been much interested by the perusal of Mr. Ormerod's collection of facts: we will not merely say that it is a work of great promise —it is more; it would do credit to any hospital-surgeon of thirty years' experience. We strongly recommend its perusal to our practical readers." LONDON MEDICAL GAZETTE.

Longman, Brown, Green, and Longmans.

DR. REES ON URINARY DISEASES, &c.

Just published, 8vo. with Plate, 7s. 6d. cloth,

ON the ANALYSIS of the BLOOD and URINE, in Health and Disease; and on the TREATMENT of URINARY DISEASES. By G. OWEN REES, M.D. F.R.S. Fellow of the Royal College of Physicians, Principal Medical Officer to Pentonville Prison, and Assistant-Physician to Guy's Hospital. 2d Edit. enlarged.

"A valuable text-book to the student of chemical pathology, whether beginning or advanced." EDIN. MED. AND SURG. JOURN.

"We know of no better manual on the chemical analysis of the blood and urine to place in the hands of those who are joining themselves to the newly-formed schools of practical chemistry in this metropolis."—LONDON MEDICAL GAZETTE.

Longman, Brown, Green, and Longmans.

DR. HUGHES ON DISEASES OF THE LUNGS AND THE HEART.

Just published, fcp. 8vo. 6s. cloth,

A CLINICAL INTRODUCTION to the PRACTICE of AUSCULTATION, and other Modes of Physical Diagnosis; intended to simplify the Study of the Diseases of the Lungs and Heart. By H. M. HUGHES, M.D. Fellow of the Royal College of Physicians, Assistant-Physician to Guy's Hospital, &c.

"That a really practical manual of auscultation for students has been long required cannot be doubted. Dr. Hughes has, we conceive, been perfectly successful in supplying the desideratum We recommend this volume to the student as an inseparable companion to the stethoscope throughout the whole period of his hospital studies."—MEDICAL GAZETTE.

"This is a very excellent work, and cannot fail to be of great use to the attentive student In it will be found every information requisite to direct his proceedings in the clinical study of auscultation. The author does not pretend to any originality, but every page shows that he has learnt what he teaches from the great book of nature, as well as from the writings of his predecessors."—BRIT. AND FOR. MED. REV.

"Our opinion is, that a work like that of Dr. Hughes was much wanted...... He has confined himself to his subject, and treated it well." MEDICAL TIMES.

Longman, Brown, Green, and Longmans.

WORKS ON DEFORMITIES, BY W. J. LITTLE M.D.

In 8vo. with 41 Wood Engravings, price 12s. cloth,

A TREATISE on the NATURE of CLUB-FOOT and ANALOGOUS DISTORTIONS; including their Treatment, both with and without Surgical Operation: illustrated by a Series of Cases and numerous Practical Instructions.

"Dr. Little presents us with a great deal of matter, possessing both novelty and interest." BRIT. AND FOR. MED. REV.

"Dr. Little's treatise contains a most comprehensive and complete description of the causes, varieties, and treatment of club-foot."—LANCET.

On ANKYLOSIS, or STIFF-JOINT: a Practical Treatise on the Contractions and Deformities resulting from Diseases of Joints. 8vo. with 32 Wood Engravings, price 8s. 6d. cloth.

"Before taking leave of Dr. Little's book, we must recommend it to our readers; and we trust it will contribute to awaken the attention of the profession generally to a class of deformities, which long were considered incurable." BRIT. AND FOR. MED. REV.

Longman, Brown, Green, and Longmans.

Just published, 8vo. price 10s. 6d. cloth,

THE NATURE and TREATMENT of GOUT. By W. H. ROBERTSON, M.D.

"We have read this treatise with much interest, and we are sure that every one that opens the volume will allow that it is not only replete with information brought down to the latest period, and of a very practical character, but that it is conveyed in an agreeable and interesting manner. It is difficult to specify any one part of the volume as more deserving attention than another, for all are ably done." EDIN. MED. AND SURG. JOURN.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. price 2s. 6d.

RECORDS of HARVEY: in Extracts from the Journals of the Royal Hospital of St. Bartholomew. With Notes, by JAMES PAGET, Warden of the College, and Lecturer on Physiology in the Hospital.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. 5s. cloth,

A DESCRIPTIVE CATALOGUE of the ANATOMICAL MUSEUM of St. Bartholomew's Hospital. Published by order of the Governors. Vol. 1,—Morbid Anatomy.

London: John Churchill, Princes Street, Soho.

Just published, 18mo. 3s. cloth,

A GUIDE for the PROPER TREATMENT of the TEETH, with a view to their Preservation. Containing a popular Explanation of their Structure and Appendages, with Directions for the Management of them in Health, and Treatment in Disease; together with Observations on the best means of replacing them when lost. By W. K. BRIDGMAN, Dentist.

London: John Churchill, Princes Street, Soho.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Oct. 30, 1846.

No 988.—Vol. XXXVIII.
[New Series, No. 80.]

Price {Unstamped, 8d. Stamped.... 9d.

LONDON MEDICAL GAZETTE

or

Journal of Practical Medicine.

Published every Friday Morning.

November 6, 1846.

Also in Monthly Parts.

LECTURES.

Page
A Clinical Lecture on Hypochondriasis, delivered at the York Medical School, by Thomas Laycock, M.D. Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine 779

ORIGINAL COMMUNICATIONS.

Remarks on Fatty Degenerotion of the Heart: with the Description of a Case in which this Disease terminated fatally by Rupture of the left Ventricle. By R. H. Meade, Esq. of Bradford, Yorkshire, Fellow of the Royal College of Surgeons of England 785
Cases treated at the Westminster Hospital. Reported by Mr. F. Wildbore, M.R.C.S.L. House-Surgeon. With Clinical Remarks by B. Phillips, Esq. F.R.S. Assistant-Surgeon to the Hospital. Part III. 787
Cases of severe Injury to the Head 787
On the Ganglia and Nerves of the Heart, and their Analogy to those of the Uterus. By Robert Lee, M.D. F.R.S. Fellow of the Royal College of Physicians, London 791
On the Scotch Epidemic Fever of 1843-4. By Richard Wardell, M.D. Ed. late President of the Royal Physical and Hunterian Medical Societies, Edinburgh, &c. &c. No. IX. 792
On the Bilateral Operation of Lithotomy, and on Lithotrity in the Female. By John C. Warren, M.D. Professor of Anatomy and Operative Surgery in Harvard University, Boston. Part II... 795
Some Remarks on Bursal Disease of the Knee-joint, and on Ganglions: with Cases. By William Brown, Esq. of Callington, Cornwall 797

LEADING ARTICLES.

The Desecration of the Dead in the Grave-yards of the Metropolis 800

REVIEWS.

The Brain and its Physiology, &c. By Daniel Noble, F.R.C.S.E. 803
The Blood, anatomically, physiologically, and pathologically considered. The Warneford Prize Essay for the Year 1845. By C. E. Joseph, M.R.C.S. 808
Page
Introductory Lecture to a Course of Military Surgery, delivered in the University of Edinburgh, May 1846. By Sir George Ballingall, Surgeon to the Queen, &c. .. 808
An Easy Introduction to Chemistry. By G. Sparkes, late Madras Civil Service...... 810
The Moral Aspects of Medical Life. By J. Mackness, M.D. 810

MEDICAL TRIALS AND INQUESTS.

Central Criminal Court.—Death from Delirium Tremens following slight Personal Injuries—Charge of Manslaughter...... 811
Free Trade in Poisons—Death of an Infant from an overdose of Opium administered by a Child 812
Case of Poisoning by Opium—Laudanum sold by Mistake for Tincture of Rhubarb 813
An Infant poisoned by Two Drops of Laudanum administered by a Nurse.......... 813

CORRESPONDENCE.

On the Treatment of Cases of alleged Pleuro-pneumonia. By R. H. A. Hunter, Esq. Surgeon 57th Regiment.................. 814

MEDICAL INTELLIGENCE.

Rate of Mortality in Paris.................. 784
Fraud in the Sale of Leeches 799
University of London.—B.M. Second Examination—Pass Examination, 1846 815
Contagious Diseases Prevention Act........ 817
Advance of the Asiatic Cholera towards Europe.............................. 817
Epidemic Dysentery at Mechlin............ 817
Obituary.................................. 818

SELECTIONS FROM JOURNALS, ETC.

On the Treatment of Diabetes by Alkaline Remedies. By M. Mialhe 790
Extraction of a Musket ball which had been lodged in the Orbit for Twenty-four Years. By Dr. G. B. De Borsa, of Verona.............................. 794
On Inflammation of the Membrane of the Aqueous Humour of the Eye. By Dr. Alexander Watson 818
Case of Calculus Vesicæ in the Female—Dilatation of the Urethra—Lithotrity—Fatal Peritonitis. By Henry Crawford, Esq.. 819
Case of Lithotrity in the Female. By Mr. Syme.................................. 821
Pathological Propositions relating to Phthisis. By Dr. Evans........................ 821

WEEKLY TABLES, ETC.

[For Advertisements, see next page.

MR. TEALE'S TREATISE ON HERNIA.

Just published, 8vo. with numerous Illustrations, price 15s.

A PRACTICAL TREATISE on ABDOMINAL HERNIA. By Thomas Pridgin Teale, F.R.S. F.R.C.S. and Surgeon to the Leeds General Infirmary.

"The book before us we at once pronounce unexceptionably good, and fulfilling to the utmost the stated object of its publication. Students and junior practitioners will find it an invaluable and unfailing guide."

Brit. and For. Med. Review.

Longman, Brown, Green, and Longmans.

Published This Day, 8vo. with eleven plates and numerous woodcuts, price 16s. cloth,

MEDICO-CHIRURGICAL TRANSACTIONS, published by the Royal Medical and Chirurgical Society of London. Volume XXIX. Second Series.—Vol. XI.

Longman, Brown, Green, and Longmans.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Dr. G. Gregory will commence his Lectures on the EXANTHEMATA, Tuesday, 10th November, at 7 o'clock. To be continued every Tuesday, at the same hour.—For particulars inquire of R. G. Whitfield, Resident Medical Officer and Secretary.

IMPOTENCY.

Just published, Second Edition, price 3s. 6d.

AN ESSAY on SPERMATORRHŒA as the most frequent Cause of IMPOTENCY in MAN; with Observations on their Nature and Cure, illustrated by Cases. By R. Dawson, M.D. Member of the Royal College of Physicians, London.

London: H. Hughes, 15, St. Martin's-le-Grand.

MEDICAL APPRENTICE.—There is a VACANCY for an APPRENTICE in the Sussex County Hospital, Brighton.—For particulars apply to Mr. Edward Kent Parson, the House-Surgeon. The Hospital contains 100 patients and upwards, and is a recognised school of practical medicine and surgery.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."

Pharm. Journal, May 1846.

Prepared by Dinneford and Earland, 172, Bond Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

DR. LATHAM ON DISEASES OF THE HEART.

Published This Day, Vol. II. 12mo. 8s. cloth,

LECTURES on Subjects connected with CLINICAL MEDICINE, comprising Diseases of the Heart. By P. M. Latham, M.D. Physician-Extraordinary to the Queen; and late Physician to St. Bartholomew's Hospital.

*** The work complete in 2 vols. 12mo. 16s.

Longman, Brown, Green, and Longmans.

TO AUCTIONEERS.—Notice is hereby given, That the sale of any Copy or Copies of FOREIGN EDITIONS of ENGLISH WORKS, in which there is existing Copyright, by *Auction* or otherwise, is illegal, and will render the party who shall expose such to sale liable to an Action for Damages, under the Act of 5th and 6th Victoria, cap. 45, for the Protection of Copyright.

Published This Day, in 1 closely-printed volume, 16mo. price 10s. 6d. cloth,

HAND-BOOK of HUMAN ANATOMY, General, Special, and Topographical. Translated from the German of Dr. Alfred Von Behr, and adapted to the use of the English Student, by John Birkett, F.L.S. Fellow of the Royal College of Surgeons of England, Demonstrator of Anatomy at Guy's Hospital.

London: Longman, Brown, Green, & Longmans.

NEW WORK BY DR. E. J. SEYMOUR.

In the press, in 2 volumes, 8vo.

THOUGHTS on the NATURE and TREATMENT of several SEVERE DISEASES of the HUMAN BODY; including—1. Diseases of the Stomach; 2. Gout; 3. Melancholy (Mental Derangement); 4. Epilepsy; 5. Neuralgic Affections Brow Ague, Sciatica, &c. By Edward J. Seymour, M.D. F.R.S. late Senior Physician to St. George's Hospital.

Longman, Brown Green, and Longmans.

MANCHESTER UNION.—ASSISTANT MEDICAL OFFICER.—The Guardians of the Manchester Union will be prepared to receive, on or before Wednesday the [illegible] inst. applications for the appointment of ASSISTANT MEDICAL OFFICER to the Workhouse. The qualifications required are a Diploma from either the Royal College of Surgeons of London, Edinburgh, or Dublin; and the Licence of the Apothecaries' Company of London. Terms, £100 per annum, the gentleman to reside out of the establishment, but in the immediate vicinity thereof; and to devote his whole time to the duties of the office. All applications to be endorsed "Medical Officer's Application," and addressed to me at my office, New Bridge Street.

By order, &c.

Jno. Harrop, Clerk to the Guardians.

Union Offices,
New Bridge Street, Manchester.
November 2d, 1846.

REFORM YOUR TAILORS' BILLS.

DOUDNEY AND SON, 49, LOMBARD STREET.

ESTABLISHED 1784.

Lectures.

A CLINICAL LECTURE ON

HYPOCHONDRIASIS,

Delivered at the York Medical School,

By Thomas Laycock, M.D.
Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine.

Policlinical or polyclinical—Abstract of a case of hypochondriasis—Diagnosis from indigestion and from melancholia—Physiological estimate of the symptoms—The reflex theories—Prochaska's—The "true spinal"—The "sensori-motor"—Objection to them—Reflexion a property of all organized matter, and of the whole nervous system—Application to hypochondriasis—Etiology—Quack hand-bills—Treatment—Ethics of quackery and of treatment of hypochondriasis—Prognosis.

We had on Saturday at the Dispensary one or two cases of hypochondriasis; two more have come to me since; and it has occurred to me that they present a favourable opportunity for a practical discourse on that affection and its treatment—and the treatment, I may add, of the patient: you will then be better able to study these cases. For I do not think it is sufficient to tell you that such are the symptoms, such the diagnostic characters, such the remedies to be adopted, in a case before us. Your relations to the man who is the object of your professional attention are ethical as well as curative; and the ethical relations, I may venture to affirm, rival the curative in importance.

Perhaps I ought not to call the kind of discourse I propose addressing to you from time to time, upon some case under my care at the Dispensary, a *clinical lecture*; for, in the first place, the term clinical ought to belong exclusively to a discourse given on leaving the bed-side of a patient in a hospital; and secondly, to a discourse having reference to the theory and practice of medicine as an art and science. But here we have no bed; the patient stands before us, is examined, prescribed for, advised, returns to his house and to his labour. You cannot restrain him from hurtful practices or irregularities, nor insure that his diet shall be suitable, that the remedies ordered shall be given to him at the times appointed, or even that the remedies shall be taken at all. Now the term clinical may *be used in the sense of practical; it is, in fact, often so used; and if we adopt this meaning,* then I think the term *poli*clinical, used very commonly on the continent in reference to Dispensary practice, will be applicable enough to the sort of discourse I propose to give you. But the prefix *poli* is not derived from πολυς, many, but from πολις, a city, as used in metro-*polis*, *poli*tical, &c. I mention this, because I have seen the word printed with *y* instead of *i*—polyclinical; and this error has led persons to think it a very presuming word to be used.

In the case for consideration (for I select one of two), you have a very common form of disease—a disease always difficult to cure, and almost invariably annoying or embarrassing to the practitioner. It is a form of disease which involves important ethical considerations—questions of moral conduct. The special points we shall have to consider, will be,—1, The disease itself and its management;—2, The ethics of gratuitous practice and of empirical practice—the misdeeds of quacks. I will read an abstract of the notes taken at our examination of the case.

The patient is a man aged 28, by trade a comb-maker, unmarried, of pallid cachectic complexion, bald across the head, looking older than he is, with a grave, anxious, and rather melancholy expression of countenance; thinner apparently than when his clothes were first fitted upon him. Gives the following account of himself—his *status presens* and his *anamnesis*,—or, in other words, of his present condition and past symptoms. He feels a large substance in the throat, near the sternum; it gives the sensation of rising of phlegm, and feels smaller after free expectoration. Just now (at the time of examination) it is more solid and larger than usual. Has a slight cough from the irritation in the throat. At the same time that he expels the phlegm palpitation comes on, and also a good deal of flatulence, and he feels fluttered. He has also wind rumbling through his bowels, and pain in the head, which is much relieved since I ordered him the cold douche two days ago, and he remarked that his head would be very bad without it. His appetite is good, his food apt to turn acid on his stomach, his bowels irregular, and his urine high-coloured. He has been troubled with wind and water-brash, and palpitation, for about two years. Nine months ago he was under my care for the rising in the throat, when it rose to the top of his throat: he got much better, and the lump was reduced to the size of a pea. During the last few weeks he has been as bad as ever, and he went to Mrs. Lamb, a worm-doctress, paying her a guinea for advice and medicine; she gave him some medicine that boiled, and said she could cure him; she never felt his pulse; no worms have come away, and he is no better. Seven years ago he was first troubled with tape-worm, but he felt pretty well; took some medicine in gin for them; went to a quack doctor at Hull, who gave him oil of turpentine, and eighteen yards of tape-worm came away; two years ago went to a quack doctor at Sheffield, and got turpentine for the worms. He was made very ill, and none came away, and has seen none pass since. Ever since that time he has had the wind and rising; he feels very nervous and low-spirited, and muses a good deal; muses about the palpitation and rising: works by himself.

Looking at his tongue we find it clean except on the posterior part; this cleanness of the tongue does not correspond with the other symptoms, and, accordingly, on inquiry we find the man has just dined. The taking of a meal always clears the tongue more or less. Examining his throat, we find no tumor or tumefaction at the point he indicates as the seat of the sensation that distresses him. He swallows perfectly well. His pulse is 90, and this is no doubt quickened by a little nervousness, for on stripping to let me examine the cardiac region, the pulse rises to 120. Percussion over the heart does not indicate any enlargement, the dull sound is circumscribed to the normal limits; the systolic stroke is short and jerking, with the sort of ring usually observed in nervous palpitation, but no other sound. No tumor, no tenderness in the epigastrium or hypogastrium.

Diagnosis.—Such are the symptoms. What is the disease under which this man labours? It is hypochondriasis. I knew already before he spoke, when he came to me two days ago; for he was an old patient; and I felt pretty sure he had paid a visit to Mrs. Lamb; for I had seen her bills distributed freely in the windows. Here is one: it describes the general symptoms of worms in a quotation (that heads the bill) from "The Cyclopædia of Practical Medicine, edited by John Forbes, M.D. F.R.S., Physician to the Chichester Infirmary, Alexander Tweedie, M.D.," &c. &c. Mrs. Lamb observes, "that she confines the bulk of her practice to the digestive function." She is therefore a specialist; and she modestly remarks, that the cases there detailed, "together with hundreds of cases published by her during her former residence in York, prove with what success Mrs. Lamb has studied this important branch of medicine. There are few diseases to which mankind are liable that may not be traced to a disordered stomach," &c.; and then she notes specially worms as a cause of indigestion, and gives cases and references, the dislodged tape-worms being to be seen at her residence—trophies of her skill.

Now what made me think that the patient had consulted Mrs. Lamb was my previous knowledge of his disease. As it is hypochondriasis he labours under, I thought if he read a bill (which he would not fail to do) he would take the bait. He did so, and Mrs. Lamb hooked his guinea; yet he is, I believe, really poor; at least he pleads poverty with me, and I know men of his craft don't get good wages. He borrowed the guinea, he says.

Now the general symptoms are those of gastric derangement; the melancholy musings rather belong to melancholia. Why, then, is the disease termed hypochondriasis? It is the combination and characteristics of the symptoms that determine the diagnosis. There is disorder of the nervous system concurrently with the indigestion, and of a peculiar kind, inducing nervous palpitation, the symptom of "rising," allied to globus hystericus, and often coincident with cardiac action, and a melancholy musing mood of mind, having reference to no external circumstances, as property, friends, crimes, a future state,—that would be melancholy, but to the state and condition of his body and his health, especially to the condition of his throat and heart. This melancholy musing on the bodily condition characterises the cerebral affection termed hypochondriasis. The nervous symptoms distinguish the case from indigestion.

Physiological estimate of the symptoms.—The physiology of the nervous system is a tangled web indeed. There are, however, two or three laws of action which I think you may regard as established, and may safely adopt in any estimate of phenomena arising out of the action of the nervous system. One of these is, that the nervous centres in the ganglia of the system, whether sympathetic, spinal, or encephalic, re-act on impressions derived from the surfaces of the body. Another is, that the changes induced in the ganglia by impressions from without, may be induced also by an inner action of the molecules excited directly by changes in the circulation,—changes in the distribution of the blood and in the composition of the blood. Another of these cases of action is, the propagation of changes in the ganglia originally excited from without to other ganglia, and exciting in these complex changes corresponding in character to those by which they were excited, and so on through the whole system of grey matter, from the smallest fibril to the whole hemispheres.

Now, when an impression is made on a nerve in connection with the ganglia contained within the vertebræ or spinal canal (as seen in this diagram), these ganglia are excited into action, and that action may be propagated or passed upwards to the encephalic ganglia; re-action begin in them, and acts of mind But, if the connexion with the ic ganglia be cut off, as, for example, of paraplegia, the re-action takes the ganglia below the break in the for the impressions derived from cannot pass upwards. The resulting are confined to the muscles, whose erves are derived from these lower and they constitute the so-called ts, or rather the "purely" reflex r there is no sensation. It is to ally noted that these mechanical or c acts are not irregular convulsive nts merely: they exhibit *design*, f the individual willed them; but no volition, and no sensation. The e place in accordance with "laws upon the nervous pulp," to use the n of Prochaska; or, in other n accordance with a definite ac- the grey matter of the ganglia. shall Hall, like Prochaska, main- at these reflex acts are limited rtain portion of the cerebrospinal mely, that portion extending from ercula quadrigemina to the cauda and to a certain class of nerves from those of sensation and volun- tion, termed incident excitor and otor nerves. The term "incident," from Prochaska, seems to be a sense analogous to that used in hen we speak of an *incident* ray of he impression *falls upon* the central along or through the *incident* excitor nd is reflected along the reflex motor

persons think Dr. Hall invented these d terms; but he did not altogether. ka uses the term *reflexion*, and rly cautions against any mathema- of the term; for iatro-mathematics mmon in his day, and algebraic s were used freely in theories. He r observes that this reflection does place, according to physical laws, e angle of *incidence* is equal to the reflection, &c., but according to t on the *medullary pulp:* probably thereby the grey matter.

many of the reflex acts are ac- ed by sensation, and on this ance another class of movements made out with another anatomical ent of the central axis. Dr. Hall's al system is robbed of its upper and ortion to make up this "sensori- stem," as it is called, the seat of the al acts—such as laughing, sighing, natomically it includes the ganglia l sense; first, the olfactory, the olfactorius; secondly, the *corpora* nd *thalami optici subservient to* es *the tubercula quadrigemina* or ganglia of vision; and, lastly, the ganglia of hearing and taste embedded in the medulla oblongata. These are the ganglionic centres of the consensual acts, just as the spinal ganglia are the centres of the reflex acts. The consensual acts are all excited by sensation; a sensation is the consciousness of an impression; this consciousness of course, and not the impression, excites the consensual acts; how it is not explained, but not by exciting an act of will—quite the contrary. The consensual acts are all as involuntary as the reflex acts. The impressions made on the nerves of special sense (the incident excitor nerves of the sensori-motor system), arrive at the sensory ganglia; then "what motions shall follow what sensations are determined by the laws written in the nervous pulp," just as in the case of reflex acts: so that, in point of fact, the pith of the whole matter is just a reflex function attributed to these sensory ganglia, with "consciousness of the impression" superadded—a helpless spectator of the determination of the "laws written on the nervous pulp" by the impressions thereon. It is really nothing more than Dr. Hall's reflex acts combined with sensation, but hid under an ingenious medley of words. The sensory ganglia have also a reflex function, and the cerebral nerves are also incident excitor nerves, consciousness looking on the ganglionic changes as a helpless spectator, if they be "purely" sensorial—if no volition be excited by it. Prochaska had the same general ideas, but he did not minutely localize them. He united the "true spinal" and "sensori-motor" into one system, as distinct from the volitional. He distinguished between reflex acts with, and reflex acts without, sensation; he distinguished also the consensual acts, and argued that they were excited by impressions—not sensations—that consciousness of the impression accompanied them only; was coincident, but not causal. I believe he is right; I prefer his views to the more modern improvements; modern anatomy is, however, much better, and it well elucidates his physiology,—but Prochaska did not go far enough.

I happened once to publish an essay on the subject, but I extended the doctrines of Prochaska of a reflex function, from the "true spinal system" to these sensory ganglia, and also to the cerebral hemispheres. I maintained that this reflex function was a function common to the whole of the cerebro-spinal centres. The first statement of my views is in my "Treatise on the Nervous Diseases of Women;" the next in the 19th vol. of the British and Foreign Medical Review, (the essay I allude to), and the next in vol. ii. of the Lancet for 1845, where you will find my correspondence with Mr. Combe. The fact is, that neither of the two systems, nor Prochaska's, is satisfactory; first, because they are conflicting; secondly, because they leave a vast number of residual phenomena unexplained and unarranged; thirdly, because they are opposed to the doctrine of unity of structure and function in all organisms. And this objection I consider the most important of all. No theory of vital dynamics can leave out with propriety either the dynamics of vegetable life or or of intellectual life. Now the power of reflex action, according to laws written on the organism, is a property common to *all living matter*, and its first manifestation is in the nutrition of organisms; but our reflex and sensorial theories leave this great and most comprehensive fact out of consideration altogether. I therefore recommend to you a higher generalization, and advise you to consider that, as regards the *nervous system*, all nerves, whether sympathetic, spinal, or cerebral, are incident excitor; that all central grey matter, whether encephalic, spinal, or sympathetic, has a reflex function; and that all the nerves proceeding from that grey matter, whether sympathetic or motor, are agents of this reflex function; of a function which determines not the consensual acts alone, nor the reflex acts only, but determines also the phenomenon of mind, and *the nutrition of organs according to design*, in virtue of "laws written on the nervous pulp." I would not press this view upon you if it had not a great practical value in such forms of nervous disease as hypochondriasis, and the chronic forms of insanity dependent upon visceral disease. The reflex theory, so far as it is true, has a great practical value; but let me caution you against adopting the whole, for, as I think, that the "true spinal system" has no anatomical existence, I am likewise of opinion that in a few years it will become as forgotten as Bell's "respiratory system;" and take a place beside it in the limbo of science, amongst numerous other used-up theories now lying unregarded there.

To apply my views. In hypochondriasis we think there is a functional disturbance of some portion of the encephalon; and it seems probable that this functional disturbance is dependent, firstly, upon an incident excitor action derived through that portion of the sympathetic system, situate *upochondra*—beneath the cartilages; in other words, from the morbid visceral surfaces supplied with sympathetic nerves. Secondly, the functional disturbance may have a centric origin; that is to say, may be excited by mental operations, and this disturbance may have a morbid reflex action on the viscera supplied from the sympathetic system. In the one case the morbid changes are excited in the brain by the morbid viscera; in the other, the morbid condition of the viscera is excited by the morbid brain. But the two morbid states must exist together to constitute the disease termed hypochondriasis.

The visceral derangement in hypochondriasis presents differences according to the stage of the disorder. In the case before us the disease is in its first stage. There is functional disturbance only of the heart's action; after a twice-repeated examination with the stethoscope we can detect no signs of structural change. The change is in the innervation of the heart alone; the pulse was at 90 while we were inquiring into his *status præsens*, but the emotion consequent on the stethoscopic examination raised the pulse to 120. This susceptibility of the heart is very often witnessed in hypochondriasis as the chief and most pressing symptom, and I think it is to be fairly assumed that it ultimately induces structural change, as hypertrophy. The heart, by being continually in a state of increased action, becomes over nourished, in the mode I have lately explained to you. The symptoms of indigestion detailed by the patient are highly characteristic; the borborygmi, the acidity, the inordinate excretion of mucus from the pharynx and œsophagus, are all every-day symptoms. The tongue is cleaner than is usual in these cases; but this was explained by the fact of the patient having just taken his dinner. It is very often scabrous or rough, with irregular red fissures in it, and covered with a dirty-looking fur.

There is a tendency to constipation in this case, but not so great as in the more advanced stages. Nor is there that disturbance of the renal function frequently met with. The nutrition of the body has evidently suffered from the gastric derangement; the pale sallow tint indicates defective depuration of the blood by the liver. The baldness is indicative of a tendency to cerebral irritation. You may often witness excessive and early baldness in persons labouring under morbid irritability of the brain. The hair is thin, dry, rough; and falls off from the region of the coronal and parietal sutures rather than from the crown.

The cerebral derangement is indicated by the sensation of globus, by the anxious expression of countenance, and by the circumstances detailed in the anamnesis, or history of the case. His patronage of Mrs. Lamb, the worm-doctress, and of the Sheffield quack, and his sitting musing, are significant of the hypochondriac. There was no real foundation for his idea that he had worms, as from his own account the last discharge of tænia took place about two years ago, and during the seven years that he occasionally passed portions of the animal his general health was little if at all affected. But Mrs. Lamb has some spicy bills out, suitable for a hypochondriac, and these had doubtless impressed him with the idea of worms.

The fancies of the hypochondriac are very varied, but I believe they have all a direct or indirect reference to the condition of the viscera, or to the functions of the nutritive nerves. I had a man to consult me lately who was strongly of opinion that his borborygmi and eructations, and pains under the ribs, and the multiform feelings he experienced, were all caused by a poor old woman, a neighbour of his; and he would watch her night and day, and if he saw her put her pipkin on the fire before going to bed—to warm her supper probably—he would shudder with rage and desperation at the infernal arts she was practising against his comfort: and the more desperate did her conduct appear, because she bought the pipkin at his own shop! I was obliged to humour the fancy, and make her out an amiable witch. Many fancies of monomaniacs arise in the same way as these perverted notions; as, for example, when a man fancies that he is with child, or that he is actually consumed away, without stomach, liver, or intestines,—nothing but a void. The exact locality of the cerebral disease can only be guessed at; it is possibly in the phrenological organ of the "love of life." That it is in a portion of the cerebral hemispheres is manifest, for the *ideas* are perverted; and that it is excited by or in connexion with the incident excitor action of the sympathetic nerves may I think be fairly granted.

With regard to the etiology, I would observe, that in the case under consideration it is probable the disease first commenced in the *hypochondra*; that the exciting cause of derangement in the digestive organs was the turpentine administered by the Sheffield quack, (although the tænia may also have had an effect,) and that this derangement has reacted upon a cerebrum already predisposed to diseased action, for he appears to be of the melancholic temperament. It very often happens, however, that mental causes excite the visceral disorder, such as excessive anxiety, continued tension of the mind in commercial or literary pursuits, or the depressing emotions, as grief. The recurrence of this attack at this season in our patient (and the increase of this class of patients) is in accordance with an opinion of the older physicians that the disease is most frequently observed in autumn. What may be the proximate cause of this autumnal recurrence is not manifest, but I would guess it to be *some change in the blood. We have had a greater proportionate* number of cases of chlorosis in both boys and young women, a greater proportion of gastrodynia, and other epigastric affections, and I am inclined to think that there is some common cause for all these affections. It may be that in this particular instance the perusal of the quack's handbills has been the *exciting* cause, just as the perusal of medical works will induce an attack of hypochondriasis. If this be the case the visceral derangement is reflex. You may have real disease induced; that is to say, structural change in the organs in connexion with the sympathetic nerves, by the reflex action of the cerebral hemispheres. The individual excites abnormal action by continually directing his attention to an organ, most frequently the heart; at first, the disturbance is functional only, afterwards it is structural. Medical students are particularly liable to this form of hypochondriasis.

Now, the method of treatment to be adopted in this case is first to relieve the gastric disorder. Once, on a previous attack, he took bismuth, and then the lump in his throat was reduced to "the size of a pea." The trisnitrate is an excellent remedy in cæliac neuralgia; it is prescribed for him again, and to relieve the acidity we combine a few grains of carbonate of soda; to act gently on the bowels we add two or three grains of rhubarb. He has already applied the cold douche to the head, and with so much relief that he "doesn't know how he could get on without it." Of course you heard my directions as to his diet and the mode of eating his food. If his case were more chronic and severe, a smart purgative would be useful, and small doses of steel and calomel, and perhaps a counter-irritant—an issue to the region of the heart: we cannot send him on his travels. The mental hygiene of hypochondriacal patients is very important. The mind should be occupied with a variety of occupations, and hope encouraged. Never say to a hypochondriacal patient—"Pooh! you ail nothing, 'tis all fancy, you're nervous." His sensations flatly contradict your assertion, and he immediately draws the conclusion that he is not safe in your hands; that, in fact, you will neglect him, and this aggravates his disease. Be sure that the man is really ill, that all pain or painful feeling is significant of disease somewhere, and sympathize with his sufferings. Hypochondriacs are often capricious, ungrateful, querulous; that they are so is a result of disease: never resent their acts; if they change their "doctor," be thankful that you have got rid of an annoyance; if they do not, do your duty firmly but affably. You would notice that I reproved our patient for paying a quack a guinea and coming to me in *formâ pauperis*.

I did that, not to resent his consultation of a quack, but his dishonourable treatment of myself. *I* had a right to the fee if he were able to pay one, for he had already, by his own acknowledgment, derived benefit from my previous services. We should always make as few paupers as we can; it is a duty which we owe to society as well as to ourselves. We should put down quackery, too, as much as we can; but I would advise you never to abuse common quacks, or their supporters. Diffuse sound knowledge; nothing else but that will stop quackery. In the meanwhile, laugh at the quacks, and the simple folk they plunder. Ridicule will do more than invective; in fact, they are not worthy the latter; I never would condescend to it. We have some amusing quacks at York, particularly on the market days. They travel about from town to town, and sell worm-cakes, corn-plasters, &c. The "Idle doctor" is a water-caster from a village in the West Riding; the cancer-doctors, bone-setters, and "wise men," are stationary, they do not "stand the market." I should recommend you to study these people and their methods. There is a worm-doctor, who "stands the market," that will amuse you much. He has a stall with bottles of worms ranged upon it, and there he sits in a Spanish cloak, with a stern grave countenance, often reading in a book. Albert Smith might make a capital comic song out of him, for every now and then he makes an oration, and abuses the York people well, while he gets their money. The boys are badly behaved, he says, and the people wo'nt believe his cures unless he produces worms as thick as a mop-handle!—"one thirty yards long" (and he exhibits a worm in a bottle) "wo'nt satisfy them!" When you have witnessed the proceedings of these men for a while, and convinced yourselves of the gross ignorance of the people who support them, you will be pretty thoroughly convinced that quackery cannot be put down till the millennium, if then. At all events, never quarrel with your patients for consulting these quacks; laugh at the practice as a good joke, keep a very strict account of *your* professional services, and make no abatement in the charge. Be honourable and just to the quack abettor, but not generous. I believe these common quacks get their patients principally from the hypochondriac class. The two who came yesterday had both been to the "Idle doctor"—the water-caster, and one had been also to Mrs. Lamb. The one from the country on Saturday had also been to the "Idle doctor;" so that the extirpation of quackery must depend partly *at least* upon the extirpation of *hypochondriasis*:—and who is so ardently hopeful as to expect that? Besides, I don't think we could deprive hypochondriacs of this amusement, or indeed ought to.

There are two classes of quacks to whom, however, you should show no quarter—the extorting and the murdering. It may be only a question of taste whether you should certify to the skill of a wandering corn-cutter—I would not do even that; but there can be no question about the obscene advertisers, some of whom, as I positively know, attempt to extort money by the threat of exposing their weak-minded victims. The obscene advertisements in some of our newspapers are disgusting, and I trust that in a few years no respectable family will countenance such papers; they are utterly unfit for the perusal of the female branches. As to quackery, then, let your patients please themselves; ridicule the humbug quacks, sternly denounce the extorting and murdering.

The *prognosis* is not favourable in cases of hypochondriasis if you can adopt none other than the ordinary plan of treatment. Medication never can do much in these cases; it can relieve the gastric derangement, and relieve or palliate the cerebral phenomena, but the curative treatment must be hygienic and moral. One of our cases on Saturday asked for a written prognosis to shew his master (he was an agricultural labourer), for if he was likely to get well soon his cow would not be sold by the Board of Guardians. I, of course, would neither be accessory to the sale of the poor man's cow, and of his consequent removal to the workhouse, nor would I aggravate his existing disease by an unfavourable prognosis. Yet I told you the prognosis was unfavourable after he had gone, because, in fact, the curative means—change of air, of scene, of employment—could not be adopted, and because there was the fear of the Union Workhouse resting like an incubus on his nervous system. And this is the case with many examples of hypochondriasis amongst the poor; they are incurable by the limited means at your command, but not incurable absolutely.

RATE OF MORTALITY IN PARIS.

THE mean annual mortality of Paris is one death among 51 persons living. In one district it is as low as 1 in 62, and in another as high as 1 in 43. In the prisons the deaths are 1 in 15, and in the hospitals 1 in 6.—*Gazette des Hôpitaux*, Oct. 20.

Original Communications.

REMARKS ON

"FATTY DEGENERATION OF THE HEART:"

WITH THE DESCRIPTION OF A CASE IN WHICH THIS DISEASE TERMINATED FATALLY BY RUPTURE OF THE LEFT VENTRICLE.

By R. H. MEADE,
Of Bradford, Yorkshire; Fellow of the Royal College of Surgeons of England.

THE peculiar pathological change in which a portion of the muscular substance of the heart is apparently converted into fat, is by no means rare, and it has been rather loosely asserted that persons labouring under this disease very commonly die of a rupture, or giving way, of the walls of one of the ventricles. It is a fact, however, that rupture has been almost always found to occur on the left side of the heart, while the morbid accumulation of fat, with degeneration of the muscular structure, has been met with principally on the right, which is opposed to the previous assumption; and, upon investigation, not more than four or five definite cases of rupture of the heart, from fatty degeneration, will be found upon record.

Before detailing the case which fell under my own observation, I will briefly detail the leading features commonly given to this pathological change. Dr. Todd says, (in the Cyclopædia of Anatomy): "We meet with cases frequently in which fat seems to take the place of the muscular fibres of the heart; in proportion as they appear to waste away, the fat is deposited under the serous membrane until the muscular parietes of the heart are reduced to a very thin lamina, of a pale colour and easily torn, between which and the pericardium a thick stratum of fat is deposited, so that a superficial examination might lead one to suppose that the walls of the heart were wholly converted into this tissue. The ventricles are generally, if not uniformly, the seat of this deposit, which must be regarded as an increase in the deposit which is found naturally along *the course of the coronary arteries.*"

This description is correct as far as it goes, but it is only applicable to one form of the disease, in which there is an excessive accumulation of fat in the cellular tissue between the serous investment and the muscular substance of the heart, which is often accompanied with a flabby and attenuated state of the muscular substance, but no actual alteration of its structure. In the true fatty degeneration, as met with in the case I shall presently detail, the muscular substance is apparently transformed into a homogeneous fatty substance having the colour of withered leaves. This lesion is principally confined to a portion of the walls; in my own case it occurred only at the apex, and Laennec and Andral met with it only in that situation. Dr. Hope, however, records a case in which it affected the greater part of both ventricles.

In this affection, the fat globules, (or, as they appear to be, rather minute granules), are deposited within the muscular substance itself, even between the primitive fibres, which lose their transverse striæ, and become softened to such an extent that it is difficult to detect their presence. The diseased muscular tissue has a yellowish aspect, produces grease spots when pressed upon paper, and is so friable as to be reduced by the least touch to minute molecules.

This fatty condition of the heart chiefly occurs in old persons, advanced age diminishing the activity of the skin and lungs, thus lessening the excretion of carbon from the blood, and causing an inordinate accumulation of fat upon the surface, or in the cavities of the body, and even in the substance of the different organs. Free oil has been found in some of these cases in the blood itself.

This morbid state has been more frequently found in the female than in the male sex. It has also been met with in emaciated individuals, and is sometimes associated with the fatty state of the liver so frequently found in persons dying of phthisis. Again, though the muscular substance of the heart is more commonly attenuated, and in a state of atrophy, a variety of fatty degeneration is described by Rokitanski as occuring almost exclusively in cases in which the heart is hypertrophied.

CASE.—On the evening of Sunday

September 21st, 1845, I was summoned in haste to see an old gentleman, aged 88, who was stated to be dying, and, on reaching his house I found that he had expired very suddenly immediately after getting into bed, and before his servant had left his room.

He was a very strong active old man, and had walked to church (a distance of half a mile) and back again by himself on the morning of the day on which he died, and had then remarked that he felt particularly well. His servant also said that he appeared in his usual health when he went up to bed at night.

The features after death were composed, and the face was pale and exsanguine; his appearance indicating the occurrence of internal hæmorrhage. I therefore suspected that he had died from the rupture of an aneurism of the aorta. The body was examined forty hours after death; the weather being cool, decomposition had scarcely commenced. The chest was the only part opened. On cutting through the integuments, a layer of fat, three-quarters of an inch in thickness, was found covering the sternum and cartilages of the ribs; the latter, as might have been expected at his age, were completely ossified. The lungs were quite healthy, and nowhere adherent to the pleura; the pericardium was surrounded by a considerable quantity of fat, and, when opened, was found to be completely distended with blood, which had separated into serum and clot. The quantity removed would be about a pound; but it was not measured. A firm clot surrounded the back and sides of the heart. On lifting up the heart the finger at once penetrated into an opening at the lower and back part of the left ventricle, near the apex of the organ, through which the blood had escaped. On a careful examination being made, an irregular jagged wound was found, about three-quarters of an inch in length, extending in a longitudinal direction. The muscular texture of the heart in the immediate neighbourhood of the rent was so soft and altered in structure that it would not bear the pressure of the fingers, but broke down into a soft pulpy mass; and, for the space of about an inch and a half in diameter, nothing like muscular fibre could be detected. The diseased part was of a dirty yellow colour, and, at the first view, looked like softened tuberculous or purulent matter; but it was greasy to the touch, and, on close inspection, was found to consist of a fatty substance. The muscular structure had undergone what has been denominated fatty degeneration; the lower part of the ventricle in which the rent had taken place bulged out so as to form a sort of pouch; the diseased muscular structure and lining membrane of the ventricle had evidently given way before the external covering of the heart or reflected pericardium, which had thus been protruded in the form of a sac.

The heart presented no other important morbid alterations; its size, and the thickness of its walls, were natural, but it was generally loaded with fat, and the muscular texture was rather pale and flabby. The coats of the aorta were partly ossified, as were the mitral and aortic valves, but not to a degree to interfere in any considerable extent with their action.

There are two interesting questions in connexion with the preceding case: viz. how long had the disease existed before rupture of the heart took place? and could it have been present for any considerable time without giving rise to any peculiar symptoms? Neither of these questions can be answered satisfactorily. About two months before his death I was in attendance on this old gentleman for some weeks. He then had a troublesome cough, and complained of a feeling of weakness, with constant noise in his head and ears. His pulse at this time was tolerably strong, and had rather a jerking feel, and the arteries at the wrist felt hard and ossified. I did not then detect any disease of the heart, Some authors think that fatty disease of the heart may be inferred with tolerable accuracy from particular symptoms, such as embarrassmemt of the action of the heart, arising from the accumulation of fat and softening of the muscular texture, and believe that this may go on to such an extent as to arrest its action altogether, and cause sudden death without rupture; but this is mere speculation; and, in the present state of our knowledge, it must be admitted that, if this pathological change gives rise to any peculiar symptoms, they are as yet unknown.

CASES TREATED IN

THE WESTMINSTER HOSPITAL.

REPORTED BY
MR. F. WILDBORE, M.R.C.S.L.
House-Surgeon.

Clinical Remarks by B. Phillips, Esq. F.R.S.
Assistant-Surgeon to the Hospital.

Cases of Severe Injury to the Head.

James Pigeon, a healthy young man, 27 years of age, was brought to the hospital at 1 o'clock A.M. in the morning of the 7th of April, in a state of insensibility. He was placed in Northumberland Ward, and was treated by Mr. Phillips. He was bleeding rather freely from his left ear and nose, the blood was of a bright red colour; the pupils were contracted, but acted sluggishly; the pulse 84, nothing remarkable about it; the surface of the body was cold, and the respirations were perfectly natural. No external injury was discovered on any part of the head. He could be roused by pinching him smartly, but he could not be brought to answer a question. Hot bottles were applied to the feet, the head was shaved, and lint dipped in cold water was placed on the scalp.

It afterwards appeared that he was driving a Hansom's cab, that the horse ran away, and, in turning a corner, he was pitched from his seat, and fell upon his head, which was in some measure protected by a stout hat.

10 A.M.—Passed the morningquietly; asked for the chamber-pot; raised himself in bed; made a large quantity of urine, and vomited freely.

Is now insensible to external influence, except when roused, and then he is very irritable, and does not answer questions. The blood continues to flow from the left ear; the pupils are dilated and sluggish; the pulse is 108, without power, and the scalp and the skin are somewhat hot.

Ol. Terebinth. ℥ij.; Ol. Ricini, ℥j.; Decoct. Avenæ, Oj. M. ft. inject. Calomelanos, gr. ij. st. sumend.

5 P.M.—Insensibility continues; the countenance is flushed; the scalp and the skin are very *hot; the pulse is* 108, *and full; and the bowels have not yet acted.*

V.S. ad ℥xvj.
℞ Calomelanos, gr. x. st. sumend.

8th, 10 A.M.—The insensibility is now much less; he can put out his tongue, which is brown and rather dry, and says that he has great pain in his head. The bowels have been freely acted upon, the pulse is 80, and quiet, and the heat of the surface of the body is by no means so great as it was yesterday. The blood is highly buffed and cupped.

2 P.M.—He is now in a partial state of coma, from which he can be roused with great difficulty. He can neither articulate his words nor put out his tongue. The pulse is 84, quiet; the pupils are dilated, and scarcely sensible to the stimulus of light; the countenance is blanched, and the surface of the body generally is peculiarly sensible to the least touch.

Empl. Lyttæ Nuchæ. Calomelanos, gr. ij.; Pulv. Ant. Comp. gr. ij. 6tis horis.

9th.—The blister has risen well, and he is now tolerably sensible; he can answer questions, and complains much of his head; the pulse is 84, quiet; the bowels are free, the tongue is coated and a little dry in the centre, the gums are affected by the mercury, and the sensibility of the surface is by no means so great.

Pt. Pil. bis die.

10th.—Much, as yesterday, except that he complains of a severe darting pain through the frontal bone. The bowels are not open; the pulse is 72.

Haust. Sennæ, st. Pt. Pil. omni nocte. Hirudines x. sing. temp.

12th.—The pain was slightlyrelieved by the leeches, but it is still severe, and he describes it as taking the course of the coronal suture. He is at times quite unconscious of what he does; if left for a moment, he gets up and endeavours to dress himself. The expirations are laboured, and the sensibility of the surface of the body continues. Pulse 80; skin moist; bowels open. The gums are fairly affected by the calomel.

Omitte Pil.; Emp. Lyttæ seq. temp.

13th.—Yesterday afternoon he had a slight rigor, but passed a tolerably quiet night. Pulse 92, small; skin perspiring; bowels open, and pupils acting. The pain in the head is a little better. He complains of pain in the left leg, which he moves only to a very limited extent, and the whole of the left side of the body is very sensible to the least touch.

14th.—The partial paralysis of left leg continues, and the morbid sensibility of the same side is unchanged. The right half of the body is quite natural as to motion and sensation.

15th.—Passed a very restless night, but is now much quieter. His mental consciousness is natural, the paralysis has left him, and the sensibility of the surface nearly so. The head is free from pain; bowels open; pulse 92, small. On the 20th of April he left the hospital by his own request, debilitated, but without a symptom of any kind of cerebral mischief beyond obstinacy. He presented himself on the 12th of May as an out-patient, and stated that he had continued well since his discharge.

James Rategan, a healthy labouring man, 36 years of age, was brought to the hospital on the 6th of July. His friends stated that he had fallen backwards from the height of nine feet half an hour previously, and that the side of his head struck the shaft of a waggon. For ten minutes he remained insensible; when he recovered a little he was talkative but incoherent.

When placed in bed he lay in a state of insensibility, but he could be roused, and was then talkative and very irritable. Arterial blood flowed freely from the right ear, his pupils acted readily, the surface of the body was cool, the pulse 96 and natural. There was a slight bruise on the right parietal bone above the ear, but no wound or fracture was detected.

Catapl. Sinap. crur. applicand. Inject. Terebinth. st. administr.

4 P.M.—His condition is unaltered.

℞ Calomelanos, gr. x. s. sumend.

10 P.M.—After taking the calomel he vomited a large quantity of undigested food, which smelt strongly of porter, and his bowels were freely acted upon. The pulse is now 80, soft, compressible, and without power; the skin is cool, and the insensibility continues the same.

7th, 10 A.M.—Vomited freely during the night a quantity of thick bilious matter, and made signs for the nurse to bring him the chamber pot, and emptied his bladder. He is a trifle more sensible than yesterday; he appears to understand what is said to him, but answers incoherently, and with indistinct articulation, and is very irritable. The pupils are dilated, and act sluggishly. The skin and scalp are cool, the tongue brown and dryish, and the pulse 64, soft, and compressible. His breathing is a good deal impaired.

1 P.M.—The face is now flushed, the skin and scalp are hot, but the pulse continues at 64, and is compressible. The mental unconsciousness is unaltered.

V. S. ad ℥xij.; Calomelanos, gr. iv. stat. sumend. Ol. Ricini, ℥ss.; Ol. Terebinth. ℥ss.; Decoct. Avenæ, Oj. M. ft. inject. s. administ.

8th, 1 A.M.—Said that he was better after being bled yesterday: he vomited, and immediately fell asleep. The pulse remained at 64, and was unaltered in character. It is now 72, quite compressible; the vomiting continues at intervals, and although he does not speak or exhibit signs of consciousness to external objects, yet he makes signs when he wishes to evacuate his bladder or rectum.

Empl. Sinap. epigastrio.

10 A.M.—Says he feels better, and he is decidedly more sensible than early in the morning. The vomiting has ceased; the pulse is 64, more full; the pupils continue dilated and sluggish, and the bowels are open. He directs attention to his side by placing his hand upon it. On examining it a fractured rib was discovered, and slight emphysema.

A rib-belt to be placed around his chest.

Vespere.—Pulse gaining power, face flushing, and respiration much interfered with.

V. S. ad ℥viij.

9th, 10 A.M. — The dyspnœa was much relieved by the bleeding; it continues, however, to be great, and he complains of much pain in the side. He can now be roused more readily, yet there remains the same insensibility to external impressions. His brow is corrugated, the face is flushed, skin hot; pulse 64, and full; the bowels are open, and the tongue is brown and dryish. The irritability of the stomach has left him.

℞ Calomelanos, gr. jss.; Pulv. Jacobi Veri, gr. ij. 6tis horis sumend. Empl. Lyttæ mag. lateri applicand.

10th.—The head symptoms are the same, but the dyspnœa is greater, and he appears by his actions to suffer severely in his chest. The pulse is 64, full, but compressible.

V. S. ad ℥x. Pt. Pil.

11th.—The dyspnœa was relieved by the bleeding; the blood was highly buffed and cupped.

Persist. Pil.

13th. — The mental sensibility is steadily improving, and the chest symptoms are better. The gums are affected by the mercury.

Omitte Pil.

18th.—Since the last date he has, as regards both head and chest, steadily mended. The dyspnœa is gone, and he has lost the wild stare and knitted brow that have been a characteristic feature of the head affection all through the case. The respirations are natural, the pulse is 80, and quick, and the gums are sore. On the 6th of August he became slightly incoherent, and wild in manner: this symptom lasted for a few days, but it was removed by free purging and blistering on the neck.

On the 26th of August he was discharged cured. The only deviation from a state of health consisted in a dilated condition of both pupils, an occasional deafness of the right ear, and some little pain around the calvarium.

Mr. Phillips observed, that an interesting point connected with these cases was the bleeding from the ears, because it is supposed by many persons to indicate a fracture of the base of the skull. Formerly, when it was held that most fractures of the skull required the employment of the trepan, either to prevent extravasation, to remedy it, or to raise a depressed bone, such signs were conceived to be of more importance than they are in the present day, when probably nothing short of signs of absolute compression would justify a recurrence to the operation of the trepan. But it is surely desirable to come to some decided conclusion as to the general correctness of that opinion.

In the present year there have been in this hospital five cases of injury of the head, accompanied by more or less considerable bleeding from the ears, and all but one have completely recovered. It may be said that those facts constitute no proof that fracture did not exist in every one of those cases. But I think, in the absence of any other sign of fracture than is furnished by such symptom, we should scarcely be warranted in assuming such a condition.

I find it difficult to conceive that if the bleeding from the ear be the result of the fracture, it should not be commonly accompanied by bleeding under the dura mater, and the consequent signs of pressure.

There are, however, persons, and among them Marjolin and Laugier, who think that something more than the bleeding from the ears is necessary to confirm their belief in the existence of fracture. Marjolin considers that the sign is worthy of confidence—indeed that it is certain—when the bleeding is followed by an abundant discharge of serum—at first bloody, but afterwards becoming limpid and transparent, and preserving its transparency for many days; then gradually ceasing. He saw as much as three ounces discharged in a single day from one ear. The patient died: an examination was not permitted, and it would be rather difficult to say from whence it came. Laugier thought it was serum resulting from the breaking down of blood extravasated under the dura mater, and that it had made its escape through the fracture. Some persons thought it was cephalo-rachidian fluid which had made its escape in the same way. Laugier has laid it down that the escape of aqueous fluid from the ear, in injuries of the head, indicates by itself alone—

First.—The existence of a fracture of the petrous portion of the temporal bone, communicating at one point with the cavity of the cranium, at another with the cavity of the tympanum, the membrane of which is destroyed, or with the external auditory canal.

Second. — The disposition of the fracture as a simple fissure, because a larger separation would allow of the escape of the blood itself.

Third. — The existence of extravasated blood under the dura mater, and in the immediate neighbourhood of the fracture.

M. Laugier says, that in all the facts observed by him, amounting to 8 or 10, the three circumstances indicated have been met with.

He says further, that the dura mater is never found destroyed in these cases, and therefore the serum escaping from the ear could not have come from the encephalo-rachidian canal. It could not be a hyper secretion from the tympanum, because it is often too abundant to have been derived from such a source, and that fractures of the petrous bone, with extravasation of blood under the dura mater, followed by a discharge of serous fluid, and without communication with the cavities of the labyrinth, do occur, and that upon examination of such subjects after death the clot has been found under the dura mater almost dry.

Still further, as he conceives, to confirm this view of the case, the serous fluid has been analysed, and found to contain less albumen than the serosity of the blood, and a double proportion of chloride of sodium.

Whether these views be correct or not, it is difficult to determine, because certainly the cases are not many where a fracture of the base of the skull allows of the extension of life for a sufficient length of time to realise those conditions. It would be no proof that this explanation was incorrect, were we to bring forward a case where these circumstances had been observed, and yet the patient had recovered—for it is unquestionable that a patient with fracture of the base of the cranium may recover. But it is certain that in very many cases bleeding from the ear does occur, without being followed by any serous discharge; it so happened in each of the five cases to which allusion has been made, and yet in one there was fracture of the base of the skull.

On the whole, then, I think it safer to regard bleeding from the ear as being no clear proof of such fracture, and it is certain that such fractures may exist without a bleeding from the ear.

It is true, however, that in a case of injury of the head, followed by bleeding from the ears, and some clear evidence of compression, that the subsequent escape of a serous fluid from the ear may increase the force of one's conviction that fracture of the base of the skull does exist.

ON THE TREATMENT OF DIABETES BY ALKALINE REMEDIES.

BY M. MIALHE.

It is well known that glucose or grape-sugar, when pure, has no effect on the salts of copper; but when it is brought into contact with an alkaline substance, it acquires the property of being consumed by the action of oxygen in the blood, and becomes capable of decomposing the oxide of copper, which it does by withdrawing the oxygen and setting the metal free. That the alkali is concerned in this reaction on the copper, is proved by the fact that, if liquor potassæ which has been added to glucose, for the purpose of effecting these changes in it, be neutralised, the glucose ceases to retain its acquired property of a combustible body, and of reducing the oxide of copper. Experiments have shewn, on the other hand, that by the process of assimilation which takes place in the animal body, starchy principles of food are speedily transformed into glucose, and that this latter, by the action of oxygen received into the blood during its passage through the lungs, is eventually converted into carbonic acid, which is exhaled during respiration.*

Reasoning from these facts, M. Mialhe was led to the opinion that in diabetes the secretion of glucose by the kidneys and other parts is the consequence of there not being a sufficient quantity of alkali in the body to convert into combustible matter the glucose derived from the starchy principles taken into the system with the food. The possibility of this hypothesis being correct has received abundant evidence from the results afforded by the treatment of diabetes with alkalies. M. Mialhe, in carrying out this treatment, also allows to his diabetic patients those forbidden articles of food, such as bread, potatoes, and other like substances, containing amylaceous principles, for which there is usually such a craving demand on the part of patients suffering from this malady. He neutralizes the ill effects which would otherwise probably result from such indulgence, by a free use of alkalies, to transform the resulting glucose into a form in which it may be acted on and consumed by the oxygen absorbed through the lungs. —*Gaz. des Hôpitaux*, 1st Oct 1846.

---

* See MEDICAL GAZETTE, vol. xxxvii. p. 788.

ON THE
GANGLIA AND NERVES OF THE HEART,
AND THEIR ANALOGY TO THOSE OF THE UTERUS.

By Robert Lee, M.D. F.R.S.
Fellow of the Royal College of Physicians, London.

The human heart was supposed by the Greek philosophers to be copiously supplied with nerves. Galen asserted that the heart has only one small nerve, which descends to it from the brain. Fallopius affirmed that a great plexus of nerves passes between the aorta and pulmonary artery, from the par vagum and sympathetic nerve to the base of the heart, which it supplies with numerous branches. In 1792, Behrends, a pupil of Soemmering, published an essay entitled "Dissertatio Inauguralis qua Demonstratur *Cor nervis Carere*," in which he pronounced the heart to be a stupid and insensible viscus. "Cor stupidum," he says, "et insensibile viscus." In 1794 Scarpa's Tabulæ Neurologicæ were published, in which branches of nerves from the great sympathetic and par vagum were represented passing to the heart, and accompanying the coronary arteries to its apex. In Scarpa's engravings of the nerves of the human heart only a few small filaments are represented, which proceed to the muscular structure, and which do not accompany the coronary arteries; but on the surface of the heifer's heart large branches are represented passing across the blood-vessels and the muscular fibres. On one of these branches accompanying the left coronary artery there is a distinct gangliform enlargement. In the engravings of the human body published by Mr. Swan, the blood-vessels and muscular substance of the heart are represented as nearly destitute of nerves. In 1839 Remak stated that he had discovered in the human subject small ganglia on the filaments of the cardiac nerves as they ramify on the surface of the heart. These ganglia he described as very small; but, when examined with the microscope, "the characteristic grey corpuscles placed among the filaments of the nerves left no doubt as to their nature."

In the 41st and 42d volumes of the Philosophical Transactions I have described and represented in three engravings numerous great ganglia and plexuses of nerves, which enlarge with the coats, blood-vessels, and absorbents, during pregnancy, and which return after parturition to their original condition before conception takes place. Recent dissections which I have made of the ganglia and nerves of the virgin and of the gravid uterus have enabled me not merely to confirm the accuracy of these descriptions and delineations, but to discover the still more important anatomical and physiological truth, that there are ganglia situated in the muscular substance of the uterus, and plexuses of nerves, which accompany all the arteries, veins, and absorbents, distributed throughout its walls. It is demonstrated by these dissections, that there are not only great ganglia at the neck and on the body of the uterus, but ganglia between the strata of the muscular fibres, and that the whole muscular and vascular structures of the uterus are pervaded with ganglia and nerves. If the dissections which I have made of the ganglia and nerves of the virgin uterus be compared with those of the gravid uterus, it will be seen that the nervous structures of the uterus enlarge during pregnancy upwards of seventy times.

There is still a small number of anatomists left in Great Britain, who assert that the uterus is an insensible organ, that it has no ganglia, and only a few small filaments of nerve-like sewing threads, which undergo no change during pregnancy. The exquisite sensibility and prodigious contractile powers of the uterus during parturition, they maintain, do not depend upon nervous influence. The heart has been adduced as furnishing a striking example of a powerful muscular organ acting without interruption during a long series of years, though very sparingly supplied with nerves. None of these anatomists have ever dissected the nerves either of the uterus or heart, and the plates of Scarpa and of Swan have furnished the only evidence they could adduce in support of their opinion, that the substance of the heart, like that of the uterus, is nearly destitute of nerves.

I resolved to dissect with a microscope the nerves of the heart while vered with alcohol, as I had done those of the uterus. The examinations which I have made of the fœtal heart; of the heart of the child at the age of six years; of the heart of an adult in a sound state; of the human heart greatly hypertrophied, and of the heart of the ox, warrant me, I think, in drawing the following conclusions:—

1st.—That the blood-vessels and the muscular structure of the auricles and ventricles of the heart are endowed with numerous ganglia and plexuses of nerves, which, so far as I know, have not yet been described.

2. That these nervous structures of the heart which are distributed over its surface and throughout its walls to the lining membrane and columnæ carneæ, enlarge with the natural growth of the heart before birth, during childhood and youth, until the heart has attained its full size in the adult.

3. That the ganglia and nerves of the heart enlarge like those of the gravid uterus when the walls of the ventricles and auricles are affected with hypertrophy.

4. That the ganglia and nerves which supply the left auricle and ventricle in the natural state are more than double the size of the ganglia and nerves distributed to the right side of the heart.

THE SCOTCH EPIDEMIC FEVER OF 1843-4.

By John Richard Wardell, M.D. Ed.
Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 622.]

The case as annexed is illustrative of the complication now described:—

Case VI.—*Severe yellow case, with head affection, and slight bronchial complication.*

Alexander Gordon, æt. 36: single: a "navigator," of full stature, and well proportioned. Features strongly marked; eyes deeply set in their foramina; hair black; temperament bilious; thorax broad and deep; is muscular and powerful-looking. Admitted Dec. 15th, 1843.

States:—Has been of intemperate *habits;* had generally enjoyed robust health. On the 12th was suddenly seized with rigors, which were succeeded by nausea, &c. ushering in a fever of the epidemic description. On admission complains of pains in the limbs, with general lassitude and languor; some abdominal tenderness, especially over epigastric region; chief symptoms appear located in head, which is hot and burning; pulse rather high; skin feels hot, and imparts a tingling sensation to the tips of the fingers; eyes preternaturally brilliant; bowels previously resolved by aperients of the saline order; has passed urine in moderate quantity; complains of thirst, but has no appetite for food; some tendency to yellowness generally.

Hab. Statim. Hyd. Chlorid. gr. v.; Pulv. Antimonialis, gr. iij. ℞ Potassæ Nitratis, ʒj.; Liq. Ammon. Acet. ℥ij.; Sp. Æth. Nit. ʒvj.; Pulv. Ipecac. gr. x.; Mist. Camph. ℥v. Sit Mist. cujus unciam capiat 4ta q. q. horâ.

Vespere.—Head symptoms in no degree relieved, but rather increased in intensity; great heat of scalp; bowels opened freely; urine passed naturally; skin as in the morning; head is rolled from side to side upon the pillow, as if in great pain.

Abradatur cap. Hirudines viii. temporibus applicentur. ℞ Mur. Morph. gr. ss.; Hyd. Chlor. gr. j. Sit pulvis horâ somni sumendus.

Dec. 16th.—Head symptoms apparently relieved; slept soundly during the night; some tendency to diaphoresis; bowels moved, and urine passed normally..

Noon.—Tongue, from remaining glazed and dry, is assuming a darker hue. From an early hour this morning has been complaining of cough, and now expectorates a glairy frothy mucus, streaked with a bloody-looking discharge: the symptoms are referrible to a slight bronchial attack under which he manifestly labours.

Emp. Lyttæ pectori statim applicand. ℞ Mucil. Acaciæ, ℥viij.; Vin. Ipecac. ʒj.; Sol. Mur. Morph. ʒij. Sit Mist. Cap. cochl. amp. duo 4ta q. q. horâ.

Vespere.—Experiences great relief.

Habeat. horâ somni Pulv. Ipecac. C. gr. xij.

Dec. 17th, morning.—Countenance

assuming a leaden hue; hepatic region not more tender than usual; urine passed freely; head much as it was yesterday; bowels open.

℞ Calomelanos, gr. vj.; Pulvis Antimonialis, gr. iij. Sit pulvis statim sumendus.

2 o'clock, P.M.—Is becoming rapidly worse; skin generally presents a mahogany tint; there is excessive prostration of strength; singultus; pulse small and compressible; surface clammy to the touch; intellect, though slightly obscured, is not much impaired, coherent answers being returned upon interrogation; feet warm; eyes sunk; pupils directed considerably inwards, which gives a strabismoid expression to the countenance.

Habeat. statim Vin. Rub. ℥j.; Sp. Communis, ℥ss. et rep. omni horâ. ℞ Sp. Æth. Nit. ʒvj.; Potassæ Nitratis, ʒij.; Aquæ, ℥viij. Sit Mist. cujus Cap. ℥j. 4ta q. q. horâ. Sinapismus abdom. applicand.

5 o'clock, P.M.—Has rallied somewhat under the treatment; urine passed freely, and of high colour; bowels open; pulse more full and regular: can articulate better than he did. Tongue thickly coated with a deep brown fur, but moist at apex and edges: skin feels clammy, but warm.

Medicamenta Vin. Rub. et. Sp. Cont. Enema Tereb. injec.

10 o'clock, P.M.—Continues a little better; hiccup less distressing, and has perceptibly been relieved since the administration of wine and spirits.

Dec. 18th, morning.—Has rallied and relapsed alternately during the night; bowels open; passed a tolerable quantity of urine. On the whole no material difference in symptoms from those described last night. The dejections in every respect appear natural.

Medicament. et Vin. Rub. et. Sp. cont.

Vespere.—Tongue covered with a brown fur, but moist. There is little or no delirium, yet a tendency to stupor is manifest. The skin yet maintains its yellow, mahogany-looking colour; cough not so troublesome; pulse neither rapid nor weak, but varies much between visits according to the quantity of stimulants given; urine passed freely, and in good quantity: hiccup the same.

Vinum et Spiritus cont. Enema Terebinth. inject. ℞ Nitratis Potassæ, ℈j.; Sp. Æth. Nit. ʒj.; Tr. Hyoscyami, ʒj.; Aquæ, ℥ij. Sit haustus cujus dimid. cap. statim et alt. part. post horas duas.

Dec. 19th, mane.—Is a little more delirious this morning; pulse 85, soft and full; tongue cleaner and moist; has no pain in any part of the body; no cough; bowels open; urine passed freely; skin a little more moist.

Vespere.—Pulse 85; some hiccup; bowels twice opened; urine passed plentifully; tongue moist, and more clean; delirium less; skin warm and moist.

Medicamenta Vin. et Spiritus cont.

Dec. 20th.—Has passed a restless night; reported to have been delirous at intervals; intellect somewhat obscure; skin not so yellow; countenance more natural; skin cool; pulse 100, rather small; no cough; no epigastric pain; bowels moved twice during the night; urine excreted of a dark porter-like colour.

Omnia Medicamenta et Vin. Spiritus. cont.

Dec. 21st.—Yellowness disappearing; seems quite collected; expresses himself as being free from all pain; countenance natural; bowels open; urine passed plentifully. Had Enema Terebinth. last night, with relief to flatulency; pulse quick; skin moist and warm.

Vespere.—Somewhat feverish, with hot skin, and complains of thirst, headache, and restlessness. Pulse 100; bowels relieved only once during the day.

Omit wine and spirits for three hours. Enema fœtida statim injiciatur.

Dec. 22d.—Feels better; pulse 100; skin cool; complains of no pain; hiccup is still troublesome; bowels open; urine passed copiously; yellowness of surface disappearing.

Vin. et. Sp. cont. ℞ Sp. Ammon. Co. ʒj.; Sp. Æth. Sulph. ʒjss.; Sp. Lavand. Co. ʒj.; Mist. Camph. ℥vj. Sit Mist. cujus cap. ℥j. 4ta q. q. horâ.

Dec. 23d.—Tongue cleaner; yellowness more indistinct; bowels open; urine voided in good quantity; skin cool; pulse nearly natural; hiccough continues, but with less frequency.

Medicamenta, &c. cont.

Dec. 24th. — Slight hiccough still present; all other symptoms nearly gone.

Ordered steak diet*.

Dec. 25th. — No pain whatever; tongue, which has been exceedingly coated, is more tender, as also the gums.

Habeat. gargarisma c. Soda Subboratis.

26th.—Continues to improve.

27th.—No return of any morbid affection.

28th.—Progresses favourably.

29th.—No return of pain, or any untoward symptom.

30th.—Expresses himself as speedily recovering.

31st.—Convalescent.

Remarks.—It is an observation advanced by some authorities of eminence who have written on yellow-fever of the West Indies, that a "firmness of fibre" predisposes to that disease—that strong muscular individuals are much more prone to its contraction, and have it in a much more malignant form, than those who are naturally of a relaxed habit. This man, as reported, was of a powerful athletic conformation, and we see that he had the distemper very severely. On admission, it was evident, from the dusky yellowish hue of the skin, that he would go on to the jaundiced condition. On the day of admission the head was more than ordinarily complained of, and this affection continued for some days. On the fifth day of the disease alarming symptoms had set in; there was a dingy hue of the whole surface; the countenance looked sunken and congested; the pulse was small; delirium, &c., present; constituting a group of symptoms that were calculated to render the result very doubtful. The reader will see that large doses of the nitrate of potassa were given in order to keep the kidneys in action, and thus avert the evil consequences that might arise from the functional derangement of those organs, especially as there was some tendency to a suppression of the secretion. The singultus was unusually persistent, and I only remember one other instance in which it was so distressing and continued so long. By the seventh day we see there was slight improvement; and on the twelfth he was ordered steak-diet—circumstances very different to what we know with regard to typhus. The head symptoms were probably in some measure dependent upon urea and cholesterine. The stimulants that were thus freely given were undoubtedly of essential service in supporting the vital powers.

Pickering, Yorks.

[To be continued.]

---

* Breakfast:—Bread, 6 oz.; Coffee, ½ pint.
Dinner:—Potatoes, 16 oz.; beef-steak, 4 oz.; *broth, 1 pint.*
Supper:—Bread, 6 oz.; tea, ½ pint.

EXTRACTION OF A MUSKET-BALL WHICH HAD BEEN LODGED IN THE ORBIT FOR TWENTY-FOUR YEARS. BY DR. G. B. DE BORSA, OF VERONA.

—— Felici, an old soldier of one of Napoleon's armies, was, during an engagement, struck just above the left orbit by a musket-ball, but, as a comrade fell dead at the same time at his side, he believed the ball had rebounded from the orbit and killed him. For more than twenty-four years afterwards he was continually the subject of violent pains in the left eye, and to attacks of cephalalgia, the eye itself projecting much from the orbit. The numerous surgeons under whose care he placed himself from time to time, believing his tale of the rebounding of the ball, afforded him little or no relief, and in 1837 he came to the hospital at Verona. The author, upon examining this case, came to the conclusion, that the projection of the eye could only be caused by the persistence of the foreign body in the orbit, for any exfoliation of bone which the blow might have caused, would, in the course of so many years (the projection commencing soon after the accident), have been discharged or removed by absorption. A portion of bone was therefore at once removed from the orbit by the trephine. The track of the ball was found ossified, excepting at a small aperture, whence issued from time to time a little fluid. After the bone was removed, the ball was felt by means of a probe at the back of the orbit, and removed by means of a forceps. The eye now retreated into the orbit, and, after some weeks, passed into a state of atrophy. The violent pains were quite relieved, and the patient died, five years afterwards only, of pleuro-pneumonia. On examination, it was found that the cranial cavity had not been penetrated by the trephine, but opposite to where the bone had been removed was a deposit of osseous substance.—*Med. Chir. Review; from De Borsa's Saggi di Chirurgia Teorico-Pratica.*

ON THE

BILATERAL OPERATION OF LITHOTOMY;

AND ON LITHOTRITY IN THE FEMALE.

By John C. Warren, M.D.
Professor of Anatomy and Operative Surgery in Harvard University, Boston.*

[Continued from p. 579.]

Case II.—Nov. 6th, 1843. Matthew Ryan, aged 14, a native of Halifax, Nova Scotia, has been affected for five years with signs of stone in the bladder. During this period he has been occasionally sounded by medical men, and the existence of a calculus made certain. He is of small size, having the appearance of a boy seven or eight years old: the development of his body has been retarded, apparently by the severity of pain he has suffered. The organs of generation are particularly small. He has now frequent inclination to pass urine, but does so in very small quantities, and not in a stream, except after a dose of oil: there is constant dribbling.

On sounding the boy, a stone was readily struck as soon as the instrument entered the bladder: the play of the sound was, however, so small, as to lead to the opinion that the bladder was very much contracted. The stone, as far as could be judged by the sound, was hard, and an examination by the rectum shewed it to be nearly an inch in length, and almost as much in thickness.

The existence of a stone having thus been satisfactorily settled, it was next to be considered what mode of relieving the patient was proper to be adopted. The operation of lithotrity naturally presented itself, in the first instance; but the bladder being very small, and the urethra narrow, there was danger that the stone could not be broken without injuring the bladder; and that if it were broken, of which there was some doubt, on account of its hardness, the urethra was too small to give issue to the fragments. These circumstances led to the rejection of lithotrity: it was, therefore, determined to perform the operation of lithotomy, as soon as the boy became accustomed to the atmosphere of the hospital.*

After the boy had been in the Massachusetts General Hospital about a fortnight, the operation of lithotomy was performed. The preparatory arrangements were as follows:—The boy was directed to take his usual food till the day before the operation; every evening he had an enema of thirty drops of the tincture of opium in a little warm water, to relieve his pain. On the day previous to the operation he took a small dose of castor oil: three hours before he had a common enema, and thirty drops of laudanum by the mouth. A ribbon was applied around the penis, and the patient carefully watched to prevent his discharging his urine.

The patient being placed on the table, his hands and feet were bound together, and the rectum was examined, to ascertain if it were free from fæces. A staff was then introduced, and the stone immediately struck: the instrument was then put into the hands of an assistant. The skin of the perinæum being made tense by the thumb and forefinger of the left hand, an incision of two inches was carried across the perinæum, midway between the scrotum and the anus, of a crescentic form, the points of the crescent looking towards the tuberosities of the ischia. The superficial fascia was next divided. The assistant was then requested to draw the instrument upwards, or towards the symphysis pubis, to make room between the urethra and rectum. By two cuts, the membranous part of the urethra was exposed behind the bulb, and laid open: the bulb itself not being uncovered.

---

* Communicated by the Author.

* A somewhat similar case occurred in the Hospital Necker, in Paris, in May, 1838. The distinguished lithotritist and author, Mons. Civiale, carried me at this period to see a patient of his in the Hospital Necker. The patient was a boy 14 years old, with the appearance of the age of six or seven years. Mons. Civiale found a stone of considerable size in his bladder, and by the lithoutripter readily crushed it. On the day following, he again carried me to see him, informing me that the boy was very ill.

When we arrived at the hospital, we met there Mons. Bérard the younger, one of the able surgeons of that hospital. On examining the boy together, we found him with a pulse of 130, suffering great pain in the right flank, and a retention of urine. Mons Bérard seemed to be of opinion, that the symptoms arose from inflammation in the right kidney, that the patient would succumb, and that no operation would save his life. Mons. Civiale thought the symptoms arose from a portion of calculus impacted in the membranous part of the urethra; he thought the operation of lithotomy might, under these circumstances, afford relief. Mons. Civiale then did me the honour of asking my opinion. It appeared to me, that the operation of lithotomy might, and probably would, afford relief: that if it were true the kidney and the bladder were in a state of inflammation, the operation would not be injurious, but, in consequence of the blood abstracted, it might be beneficial.

The patient was then ordered on the table, and Mons. Bérard declining to operate, the operation was performed in the lateral method by Mons. Civiale, and fragments of stone were extracted to the amount of about a quarter of an ounce. The boy was carried to bed in a state of comparative ease; on the next day he was in a comfortable condition: the following day I left Paris, and never heard the final result of this case.

A straight probed bistoury, having a blade two inches long, was then pushed into the groove in the staff, and the operator was about to pass it into the bladder, when the patient drew back, and thus separated the two instruments. By means of the forefinger of the left hand passed into the groove of staff, the the probe-pointed knife was readily restored to its situation in the groove, and then the operator taking the handle of the staff in his left hand, and bringing it downwards, the knife passed along the groove into the bladder. No urine was discharged then, or at any period of the operation, except when the staff was introduced, at which time the little that had been secreted made its escape. Then striking the stone with the end of the probe-pointed knife, to ascertain its entrance into the bladder, the staff was withdrawn.

The forefinger of the left hand was next passed along the back of the knife, and served to guide its incision, which was made very small, at first on the left, and then on the right side of the prostate. The forefinger following the knife was applied in search of the stone, but not coming in immediate contact with it, and knowing the stone could be instantly found by the rectum, I introduced the finger into the intestine, and pushed up the stone towards the wound. Having enlarged the opening with a common knife, I pushed the stone directly through the wound thus made, and extracted it without the aid of the forceps. The opening of the bladder was, of course, the smallest possible, and barely allowed the stone to pass through. The loss of blood was very small: the operation ended, the patient was carried to his bed.

In the afternoon he had some pain, and being much accustomed to the use of opium, thirty drops of M. Munn's Elixir were given to relieve him. In the evening, five ounces of blood were drawn from the arm, as a preventive of inflammation; a precautionary measure I am in the habit of adopting after capital operations, in which there has been no great loss of blood.

On the next day, the boy was quite comfortable. A pledget introduced into the wound after the operation having come out, another was passed to the bottom of the wound; the urine having issued as much by the penis as by the wound.

No remarkable changes occurred afterwards: the pulse gradually sunk to ninety; the urine resumed its natural course, and the boy's appetite became quite outrageous, before he could with safety be indulged with food. In a week after the operation he had half a pint of broth a day, on the tenth day some bread, and was allowed to sit up, and walk around.

On the fifteenth day, the urine had ceased to pass through the wound, and issued altogether through the urethra. The patient had already a control over it, which he had not enjoyed for many years. The wound, being free from the irritation of urine, was contracting and cicatrizing rapidly.

Dec. 18th, 1843. His mother having reported that he had been unable to pass his urine, and that he frequently pulled at the præputium, led me to introduce a sound into the bladder, which passed readily, and encountered nothing extraordinary. The finger being introduced into the rectum, the bladder was distinctly felt in its normal state. He was ordered a dose of oleum ricini, and a diminution of food; it being thought likely the pain he had experienced was colic, and that his pulling the prepuce, when he felt the pain, was the effect of habit.

On the 14th, as he represented that his pain still continued, I introduced the sound again, and ascertained that the bladder contained no extraneous substance: this was also done, at my request, by the house-surgeon. I was then led to suspect some trouble in the cavity of the abdomen, especially on learning that he had eaten extravagantly, and of pernicious articles of food, which had been given him by some person unknown.

On examination of the abdomen, I found it tumid, tender; his appetite had failed; his pulse had quickened to

130. His bowels were again cleansed by castor oil, a sinapism was applied to the epigastric region, and mild enemata used occasionally: he was also restricted to the use of water.

On the 15th, the symptoms continuing much the same, although there was a very free discharge of urine in his bed, he was ordered a solution of the tartrate of antimony, to be taken in nauseating doses. This I preferred to bleeding by the arm, or leeches, on account of the debilitating effect produced by the abstraction of blood, immediately after the operation, and its terrifying influence on this boy's mind.

Dec. 18th. The appearances are quite favourable: the appetite is returning; he is able to pass the urine in a vessel. The urine, tested by litmus paper, was found to be acid.

Dec. 28th. He is now quite well, passes his urine naturally in every respect, and no longer has involuntary discharges of it during his sleep. He proposes to return to Halifax on the 1st of January, 1844.

Remarks.—The result of this case confirms the favourable opinion made by the preceding. The simplicity of the operation, the comparatively small pain from the incisions, the facility of seizing and removing the stone, the very slight loss of blood, and the absence of any severe consecutive symptoms, are facts which concur in giving a favourable impression as to this mode of operating. Whether the results of a considerable number of cases would be equally favourable, cannot be determined but by a long series of trials.

[To be continued.]

SOME REMARKS ON

BURSAL DISEASE OF THE KNEE-JOINT, AND ON GANGLIONS.

With Cases.

By WILLIAM BROWN,
Of Callington, Cornwall.

THE following remarks and sketches of cases will, I think, be illustrative of some points connected with the subjects treated by Mr. Skey in his valuable paper published in the GAZETTE of the 28th of August. But first, however, I would beg to ask whether Mr. Skey, in advocating the "thread" in the treatment of the solid forms of bursal disease of the knee-joint, means a single thread only? If so, he may be taken to have gone beyond others, or others beyond him, according to the difference of opinion of different persons, namely, as to whether the single thread is an advance upon the seton as ordinarily used, or the latter upon the former. For my own part, I cannot but think that, if the common seton is quite safe, it must be more speedily and certainly effective in causing the breaking down of a solid mass like that of a consolidated bursa than the single thread. Hence the latter would be an unnecessary refinement. And that the ordinary seton *is* quite safe in these cases does not, I believe, admit of question. Indeed, Mr. Key spoke favourably of the practice many years ago. The following case came under my treatment in the early part of last year.

Thomas L., a young man, the son of a mining captain, and himself a miner, applied with an enlarged bursa of the left knee. He had been latterly subject to much kneeling in his occupation. The thickening had been a considerable time in progress; so much so, in fact, that the case was one of *consolidated* enlarged bursa: but the tumor was not so round in outline as it is in most cases. I began with the plan of Mr. Liston, as followed at University College Hospital, namely, that of powerfully rubbing in a strong solution of iodine, and covering the painted part with a piece of lint, kept on by small strips of adhesive plaster, to prevent volatilization of the iodine. The result was a good bag of yellow serous fluid—a very good blister. The influence of this I encouraged with poultices, &c., but the progress of the case in regard to the real tumor was unsatisfactory, although the general appearance of the knee was improved, from the reduction of the thickened character of the superimposed and surrounding integuments, &c. I now, partly at the suggestion of Mr. Hender, who has successfully adopted the seton in several cases within a period of about twelve years, passed a seton of as many, perhaps, as eight or ten threads through the tumor. Emollient poultices were ordered to be kept on the part, and the seton to be moved to and fro every day. The breaking down of the mass was rapid, and in every way satisfactory, the seton not requiring removal till the breaking down was complete.

I find that setons are available in cases of ganglions also, although it appears that in some other cases they cannot be borne long enough to be successful. Thus, for an example, more than twelve months ago, a lad, about 15, was brought with a very large ganglion on the back of the left hand. It was long in shape, and irregular, being narrowed or partially divided at one part. On the hand being flexed or clasped, the ganglion would become fixed, and be made very tense. It materially weakened the hand and fore-arm, and caused, on the hand being at all strongly used, much aching pain. Not having a better instrument at hand, I introduced a very narrow bistoury under the skin at some little distance anterior to the ganglion, and passed it on through this, but unfortunately not far enough to pass through the other end of the tumor. I say "unfortunately," because the case illustrates what I think to be the general error in the treatment of ganglions by "puncture," as it is called. Thus, if you burst a ganglion by the old practice of striking it with the back of a book, the contents escape, not externally, but in the surrounding cellular tissue, where the thick glairy fluid which constitutes it acts as a foreign substance, causing an increased action, by which, not only the fluid itself is absorbed, but the sac so reacted upon is more likely to become obliterated. The operation, therefore, should be commenced on the subcutaneous principle, and the instrument carried through the distal wall of the sac, the fluid being pressed out through *that* aperture into the surrounding cellular tissue, instead of being squeezed out at a mere puncture in the surface. This practice has been, I believe, found uniformly successful by Mr. Liston, and it is that which he inculcates. To return to the case that I was describing. After squeezing out the contents of the ganglion, I applied a compress: the opening closed up, but there was still a sac and fluid left. After a little time I passed a small seton through the tumor. On seeing the case on the third day, I found the inflammation to be considerable, and there was febrile disturbance. The seton was withdrawn, and bathing and poultices ordered. An aperient, and saline diaphoretic medicines, were given, after which the case very speedily, and without any further trouble, did well.

In disease of the bursa over the patella, a blister, or a succession of blisters, is commonly used in recent cases, and in those where the contents of the tumor are still fluid; but many cases occur of the following kind, which do not require any remedy so severe as a blister. A person has been kneeling much; and at length finds a pricking, heating, and pain, at the front of the knee, together with a stiffness of the joint, and an inability to stand or walk firmly. The front of the knee is hot, red, tumid, and tender, but the bursa does not as yet contain much fluid. The joint is ordered to be kept at rest, a purgative is administered, a few hot poultices are applied, with perhaps some common liniment, containing ammonia, and all becomes well. But, in the cases which are more advanced, where the bursa is distended to the size of a small orange, and there are the symptoms of very active inflammation, I believe that there is a remedy, which is available in an earlier stage, productive of less pain, and more speedy and certain in its effect than blistering would be. I allude to the tartar-emetic ointment, with or without a portion of mercurial ointment, as spoken of by me in the GAZETTE of April 17th, 1846, in some remarks on injuries to the elbow-joint, and consequent enlargement of its bursa.

James Langsford, æt. 37, a slight man, by trade a carpenter, had been kneeling much in his occupation for some days. Inflammation was induced in the bursa of the left knee. After three or four days he sent an account of his case to us, in order to have some medicine. This was on August 19th. Dr. W. B. Hender gave him a dose of cathartic pills, containing two grains of calomel, and three small powders of calomel and compound powder of antimony, and ordered hot applications

knee. On the 21st I saw him.
was febrile disturbance, great
ement of the front of the knee,
ntense heat and redness. The
was distended to an unusually
size, and had a feel and fluctua-
s if the contents were puriform.
an objected to the swelling being
d. I then ordered him to bed,
he limb might be kept quiet, and
elevated position; and further
ed that the knee should be kept
ed completely round with large
arley-meal poultices, changed
four hours. On the 24th I
d the effectual rubbing in of
-emetic ointment, to which had
added a portion of mercurial
ent, with a continuance in the
the emollient applications in the
als. The result was a very
y decrease of the enlarged bursa
f the surrounding swelling. After
g him on the 21st, I felt some
re at falling in with Mr. Skey's
rity, as to the safety, and, in
r cases, as to the desirability of
an of opening these bursæ. (I
ware that Mr. Samuel Cooper
s of the necessity of sometimes
g them when there are the loose
-seed-like granular bodies in the
fluid.) In not adopting the
ere, I was not influenced by any
sed communication between the
and the knee-joint, and I cannot
ink, with deference to Mr. Skey,
e misunderstands the nature of
neral prejudice against the open-
f bursæ, when he places it on
ground. The remark may apply
actitioners whose education took
at a remote period. but it
cannot do so to many others.
rejudice, as I have understood it,
nded on the idea, that the opening
l synovial, or pseudo-synovial,
es, so as to admit air, is likely to
llowed by bad consequences, in
ape of inflammation, suppuration,
and on the idea, or fear, that
consequences may affect the
bouring joint from the propinquity
e bursæ to it. However, the
ing case, which has occurred to
nce seeing Mr. Skey's paper, fully
out his doctrine as to the perfect
of opening bursæ when in a
of inflammation, and as to the
iety of opening them in certain
nces.

Mr. J., about 50, thin, a carpenter. Had lately had much kneeling on a ladder in painting houses: the left knee became sore and painful. I found the front of the knee red, hot, and somewhat swelled, but the bursa itself was not much distended. I gave him a purgative, and ordered rest for a few days, with bran and vinegar poultices. The next day the knee was better, and he worked again. About ten days after he again applied to me: this was on the 24th ultimo. The bursa now was considerably distended; there was great heat and swelling around. I ordered him to bed, with barley-meal poultices enveloping the knee, and a purgative was prescribed. The next day he obstinately got down again.

To rub in the tartar-emetic and mercurial ointment, and to continue the poultices.

Sept. 27th.—The swelling about the knee was great. The fluid in the bursa seemed to be puriform. He had a dose of purgative pills that night, and a saline diaphoretic draught the next morning.

28th.—I punctured the bursa. At first coagulated blood came, then thick pus freely.

He was ordered to use moderate-sized linseed-meal poultices.

Oct. 1st.—The whole of the swelling had gone down, and everything was looking well.

FRAUD IN THE SALE OF LEECHES.

For some time past a very extensive fraud has been perpetrated in Paris by the sale of leeches in a gorged state. An official inspection has been lately made by order of the Government, and the result is, that no less than 40,000 leeches have been seized and condemned by the commissioners appointed to visit the different stores where leeches are kept for sale. The cause of this fraud appears to be the strange system which exists in Paris of selling leeches by weight; hence they are allowed to gorge themselves with the blood of dead animals. A fraud of this kind is easily detected by very gently pressing the body of the leech from the tail to the mouth, when a small ring of blood appears. This is not observed in a leech which is in a proper condition for medical use.

MEDICAL GAZETTE.

FRIDAY, NOV. 6, 1846.

In two articles on the subject of intramural interments,* we have endeavoured to shew that the practice was not only detrimental to the health of the public, but that, in the treatment of the dead, it was necessarily attended with acts of indecency and desecration, which would reflect disgrace upon a nation far lower in the scale of civilization than ourselves. It is only by cases being brought prominently forward as they occur, that the necessity for abolishing the practice will become apparent; and we trust that the repetition of these exposures will, before long, lead to the voice of the public being heard within the Houses of Legislature. The following instance of the mode in which the bodies of the metropolitan dead are treated in a city burial-ground, was lately a subject of investigation before one of the Police Courts. We take the particulars from our contemporary the *Times*. "It appears that the place in question is already choked up with human remains, yet bodies still continue to be received for interment. In order to make room for the fresh supplies, the graves already occupied are brutally disturbed, the coffins they contain are broken up, and the mortal contents thrown into large holes, or left about the ground till they undergo complete decomposition. Pieces of funeral furniture, with flesh and hair adhering to them, have often been seen in this burial-ground, after the process of disinterment has been resorted to for the purpose of crowding more remains into a space already filled almost to the surface with decaying mortality. We presume that a desire for profit induces the proprietors of these burial-grounds to pack the dead so closely together that there is not sufficient earth above them to prevent corruption to the surrounding atmosphere. While cemeteries are suffered to exist as private speculations uncontrolled by law, there will always be found persons ready to make interment a lucrative trade by any means at their command, however repugnant to humanity or offensive to decency. Lucre is the main consideration of these mercenaries, who care not how many times a grave is disturbed, or how many tenants are brutally ejected from a tomb, so long as a fee is paid for every fresh occupant. While one is being placed in the ground amid the mockery of a religious ceremony — performed perhaps by some "respectable man" in a dirty surplice, as at Sheen's ground, —there may be parties busily employed in another quarter of the cemetery rudely digging up the remains that were but a short time before committed to the earth with the same show of respect that is being paid to the last new comer. In these overgorged burial-grounds the repose of the dead is scarcely worth a year's purchase. Those who would visit the spot supposed to contain the remains of some departed relative or friend, would in many cases repair in vain to the place where the object dear to them in life had been originally buried. What must be the feelings excited in the minds of those whose kindred may have been recently interred, at hearing of pieces of human flesh scattered about the ground, or carted away by a dust contractor to a waste devoted to the reception of rubbish?"

From these remarks it will be seen that there is one most disgraceful feature connected with the disposal of the dead in the metropolis, namely, that any person may hire a piece of ground, and actually trade in interments! He is also permitted to have a deputy in the shape of a "respectable man" in a dirty surplice, who may go through the form of reading the service over the dead. The necessities of the poor drive them to resort to these grounds for the interment of their deceased relatives; and the low fees, arising from much *professional* competition among the grave-yard proprietors and their deputies, serve as a strong inducement. The manner in which coffin furniture, and metal plates and handles, find their way into the shops of marine-store dealers, now appears intelligible; for when one of these private nuisance-yards becomes filled, and ceases to pay interest for the money invested in it, the owner, on the principle of *il faut que tout le monde vive*, soon finds the means of making room for as many corpses as are brought to its gates. Was it ever known within the memory of man, that one of these private grave-yards had been shut up in consequence of its being overfilled? We doubt it. A return of the number of these grave-yards, with their superficial contents, and the number of dead interred in them during a given period, would furnish some curious information. As an illustration of the mode in which these private speculations are carried on under the eyes of the police authorities, we quote an extract from a letter addressed, by a Mr. Sheen, to the editor of the *Times*. This worthy, who is, of course, a staunch *intramuralist*, is indignant at having a complaint made against "his burial-ground," and he gives vent to his indignation in the following grammatical and logical epistle:—

---

* Pages 561, 663.

"With respect to what you have thought proper to state as regards my burial Ground as a place of Interment, and being so full, I beg to say it is not one quarter full, the price no less than any other cemetry; and, as regards making money, I am inclined to think that is the chief aim of your or any other persons who labour. Respecting the management of the Ground, if their was not the strictest decency, humanity, and respectabillity observed, the Ground would never have obtained the high name it now holds; in proof of which I refer you to the police, who are paid by me independently for that purpose; and I openly and fearlessly challenge your correspondent, the 'Churchwarden,' to a comparison with the Churchyard of the parish with which he is connected. He, being a Churchman, seem to have no Idea of dissenters. I most respectfully inform him our Minister is a respectable man, and has read the service for the dead in my Ground for this last 12 years, and at other places of interment many years previous, (but the fact is your correspondent thoughts, at the funeral he alludes to, seems to have been more on the Colour of the surplice than the solemn rites of the dead). Now, Mr. Editor, comes the gravest part of your charge; you there say that the clearing out of some such Cemetery as Mr. Sheen had occasioned the mass of Funeral furniture, &c. If you had taken the trouble to have inspected my Ground previous to such a charge, you would have found it against the rules to inter Lead or Iron Coffins in any part of the ground, with the exception of purchased Graves. I feel most happy to inform the relatives and friends of persons interred in my Ground, that any Coffin and its contents may be produced for their inspection, on any reasonable notice being given, from the time the Ground has been in my possession. Trusting to your prompt insertion of this answer to my foul calumniators and little enemies,

"I am, Sir, your obliged servant,
"SAMUEL SHEEN."

"Church-lane, Sept. 24."

The callousness of feeling which this letter displays furnishes a striking illustration of the immoral influence produced by the burial of the dead in large cities. To show that the bodies of his customers have not been chopped up and carted away by dust-contractors, and their coffin furniture &c. transferred to the shops of marine store-dealers, here is a man who coolly offers, upon "reasonable notice being given," to produce in the shape of the coffin and its contents, the dead relative of any person whose body has been buried in the ground since it has been in his possession! The bare fact of such a proposition being made, proves the insecurity of tenure for the repose of the dead in what our contemporary justly calls these over-gorged burial-grounds.

With the revelations of the last two months before us, what, we would ask, becomes of that objection which has been made to the abolition of metropolitan interments, on the ground that the poor have a desire to be buried near the bodies of their relatives—a sacred feeling which it is plausibly argued it would be unwise and impolitic to discourage? Is there any certainty that a deceased relative buried in a London graveyard, whether private or parochial, will be suffered to remain quietly in his grave for one twelvemonth? If the ornaments about the coffin are sufficient to tempt the cupidity of persons like the respectable men "in dirty surplices," or if the graveyard be inconveniently filled, the inhabitant of London will, when dead, have less chance of lying near his forefathers than if his body were consigned to an extra-mural grave!* With the well-known fact of the sale of second-hand coffin wood, which has become a petty trade in some low districts of London, and the burning of bodies in graveyard furnaces made for the purpose, it is absurd to adopt this sentimental style of reasoning, and to talk of not depriving the poor of the consolation of lying near their forefathers! It is a foolish pretence, a sort of *ad captandum* argument which has no foundation or truth. Further, we will undertake to say, that there is no other instance in which the perpetration of a public nuisance would be tolerated for the sake of private feeling, even were it not proved to be so entirely misplaced as it is in this instance.

One other objection requires a remark. It is, that, if cemeteries be placed within the vicinity of towns, dwellings will grow up around them; while, if placed at a distance, they will interpose obstacles in the expense attending the transport of the dead. The answer which here suggests itself is, that so soon as cemeteries become over-filled with the dead and surrounded by the habitations of the living, they should be closed; but it is obviously absurd to hesitate, at the present time, about removing one nuisance, merely because another may present itself for removal hereafter.

The real and only substantial objection to the exclusive adoption of extra-mural interment is the difficulty of suggesting a method whereby this change may be economically brought about. Some of the most strenuous opponents of the plan have been those who have derived the largest fees from the continuance of the present practice; and we think this is the greatest difficulty with which any Government, honestly bent on reforming the system, will have to contend. Vested interests, independently of those of the private graveyard-mongers, of a most extensive and influential kind, are decidedly opposed the change; and one of the first eps for the abolition of the practice, ould be either a noble sacrifice on the art of the individuals who benefit by e continuance of the present system, r the payment of a compensation by overnment. Neither of these plans ay be convenient; and in this case would be candid in the opponents of e measure to make the acknowledg-ent at once, instead of vainly attempt-g to justify the practice by untenable ssertions, sentimental reasoning, and consistent objections. We hold that is sufficient to prove the existence of n evil: it is for those who take upon emselves the government of the ountry to provide a remedy,—*Salus opuli suprema lex.* They who do not esitate for the sake of improving the ealth of towns to bring in a bill con-ining no less than three hundred and wenty-five clauses, and making the most weeping innovations on private and ublic rights, show a degree of moral ourage which should not allow them o be deterred from carrying their remedies a step further, and legislating or an evil less apparent perhaps to the ommunity, but quite as great as the uisances which they propose to abolish. We trust that the prediction of our contemporary, the *Times*, may prove well ounded—that another session of Parliament cannot elapse without the assing of an act for the regulation of nterment.

---

* In the investigation reported at page 509, sufficient evidence is adduced to show how little respect there is for the repose of the dead. One marine store-dealer deposes to having purchased forty-four pounds of the metal plates and handles of coffins, which had been brought in various lots to his shop! Another man is seen with a barrowful of these metal plates, and none of these have been yet accounted for. The fact is, these offences against decency are often perpetrated by parishes, as that investigation plainly shows; and as the parishes are the appointed prosecutors, it is not likely that the public will hear any thing more of the matter. See also p. 726.

Reviews.

The Brain and its Physiology, &c. By Daniel Noble, M.R.C.S.E. 8vo. pp. 450. London: Churchill. 1846.

The great object of the author of this work is to show the *method* whereby the physiology of the brain should be determined; and in his view there is none comparable to that recommended by Gall. According to Mr. Noble, phrenology alone offers a satisfactory explanation of all those complex psychological problems, which have for ages bewildered the philosopher and the physiologist.

With considerable ingenuity, great industry, and a thorough acquaintance with his subject, he attempts to strengthen the theory which it is his object to prove, by showing the insufficiency of all other explanations which have been hitherto brought forward. All methods of investigation, excepting that of Gall, are, in his opinion, faulty, and can only lead to error. The system of phrenology has been attacked on the ground of its not according with the results obtained by vivisections, researches in comparative anatomy and pathology. Like a clever logician, therefore, the author strives in three successive chapters to demonstrate that these methods of inquiry are inadequate to the primary revelation of the functions of particular parts of the encephalon. Even admitting that he establishes the absolute inconclusiveness of such modes of research, it is surely obvious that he is resting the strength of this part of his argument upon the weakness of that of his adversary. We, however, deny, *quoad* phrenology, that these methods of research are so inconclusive as he represents them to be; and had the experiments of Flourens, Magendie, Bouillaud, and others, been attended with results at all supporting Gall's doctrines, as they are now in our view adverse to them, we should then probably have found that a strong argument in favour of phrenology would have been based upon them.

Mr. Noble regards phrenology as one of the inductive sciences; and endeavours to establish by fact and reasoning, that cerebral development furnishes a means of detecting the particular physiology of the brain, even although the observations be limited to individuals of a single species. The principle with which he sets out is:—

> "If an unusual development of part of this structure *always (?)* coincide, under given circumstances, with some remarkable energy in mental manifestation, the inference is naturally deduced that the two circumstances are not accidents of coincidence, but that the particular power is in some dependence on the development" (p. 96).

We so far go with the author, that it

an unusual development, determinable by physical form, did *always* coincide with some remarkable energy of mental manifestation; and the *given circumstances* were universal, constant, easily definable and readily intelligible, we would admit his inference: but were this the case, we do not think he would have to contend with such antagonists as Flourens, Magendie, Tiedemann, Esquirol, Bostock, Carpenter, Todd, Bowman, and others; men who have made anatomy and physiology a close and intimate study, and who, if such coincidences as those assumed by the author *always* existed, could not have failed long ago to have perceived the connection, and to have had conviction forced upon them, in spite of any lurking prejudice against the new doctrines. In common with many others, however, they deny the existence of that constant coincidence of cerebral development with mental manifestation, and repudiate as unsatisfactory the explanations by which phrenologists attempt to account for what they designate the exceptions or anomalies.

We gather from sundry remarks scattered through the work that the author looks upon his professional brethren, who differ from him in opinion, as somewhat inconsistent in accepting as *sciences*, physiology and medicine, when they are open to objections which, in his opinion, are as numerous and as strong as those urged against phrenology; *i. e.* crude observation, hasty generalisation, false inferences from facts, and conflicting theories. The best that can be made of this argument is, that phrenology is not in a *worse* position than medicine or physiology. Now neither of the two latter can be regarded as exact sciences, nor would reasonable men make any application of principles to practice which had not some good foundation in experience and observation. That these sciences are beset with fallacious doctrines proves nothing in favour of phrenology; nor, because there are some truths in them, does it follow that all which is called medicine or physiology, should be regarded as worthy of acceptance in a scientific view. The authorities to whom we have above referred, class phrenology among those improved physiological speculations with which medical science abounds. It may be intrinsically no worse than other hypotheses, but this is no reason for its adoption.

It may be doubted whether phrenology has at any time taken so firm a hold among physiologists as the theory of *phlogiston*, among chemical philosophers in the latter half of the last century; nor do we believe that the arguments adduced in favour of phrenology, although highly ingenious, are so strong as those which were urged before the discovery of oxygen, in favour of the existence of phlogiston. The majority of philosophers of those days, like the majority of the physiologists of the present time, were either required to prove a negative with respect to a particular hypothesis, or to admit its truth.

We are ready to allow that Mr. Noble gives a more able and lucid summary of Gall's system than we have ever before met with. His explanations are clear, and his language good, sometimes perhaps passing a little beyond the boundary which dispassionate reasoners commonly set for themselves. It is, however, manifest through the whole work that he is the *advocate* and not the *judge* of the system. He candidly acknowledges that he thinks there is a failure of proof with respect to some of Gall's views; and we only differ from him in thinking that the failure of proof is much more extensive than he is now disposed to allow. It is not our purpose to examine his arguments seriatim. The minds of men differ in no way more strikingly than with regard to the amount of evidence which is required for the reception of particular facts or doctrines. It has always appeared to us that phrenologists are most easily satisfied, and that very slight *evidence* is by them received as *proof:* but we think it would be an unfortunate day for science, when data so loose and conflicting as those collected in favour of the independent existence of individual organs and manifestations, were admitted to establish a particular doctrine. The Baconian would again soon give place to the Aristotelian system. Mr. Noble, as a professed follower of Bacon, would, in our opinion, have done better to have tortured his facts, to have handled them as if they were enemies to truth,—*ignes fatui* leading m into the swamp of error, than to ve dressed them up in a costume nding to conceal their imperfections. nese are the *idola tribûs* against hich the inventor of hypotheses must dulously guard. Every true disciple the Baconian system should have e independent spirit to treat his vourite opinions with the severity ith which he would deal with those of her persons who were attempting a eat innovation.

In rejecting the inferences drawn by ir author from the facts which he lduces, we have no theory of our own set up, nor do we know any theory hich can give a satisfactory explanaon of the relations between the manistations of the mind and the brain. e must, however, protest against the sumption, that because such a theory not now known to us, we are to take ie first which *appears* to afford an planation of subjects hitherto inolved in mystery. On this principle ie philosopher of the nineteenth ntury might have continued to explain the phenomena of combustion y reference to the phlogistic hypoiesis. By assuming phlogiston to be ie principle of fire, and at the same me the principle of levity, all difficulties as to facts were removed, and here was no other theory to compete ith it. We doubt whether phrenology ccupies even so favourable a position mong men of science in the nineenth, as this false hypothesis held mong philosophers in the eighteenth entury.

Mr. Noble informs us that—

> "When the cerebral organ of some given aculty is ascertained to be much below the verage size, its manifestations in a high legree are *never** to be witnessed. In this oint of view unqualified demonstration nay be had,—the fact is universal. The easons of the differences affecting positive nd negative cases are clear enough: a large mount of brain *may* be unequal to its ustomary power *from defective quality*,— small one can *never* display remarkable nergy; as with the muscular system a arge development of some particular muscle loes not always coincide with the expected strength, but a very small muscle will always be relatively weak" (p. 119).

We pass over the rules by which the "*average* size" is supposed to be determined, and the vague terms of development "much below," or "manifested in a high degree," as being perfectly beyond the scope of all argument,—because there is nothing fixed to grapple with; and we come to the "Baconian" (!) method, in which the author explains how it is that a large amount of brain may be unequal to its customary power. We have put in *italics* the words, "*from defective quality*," because we should like to be informed of the experiments and observations whereby Gall and his disciples arrived at a knowledge of this alleged fact. To compare a large brain to a large muscle, and a small brain to a small muscle, is just as false an analogy as if the process of thinking were compared with muscular contraction. In one, a physical change is *visible*, and produces a physical effect; but it is a pure assumption to affirm that the condition of a muscle under different circumstances throws the least light on the mode in which mental phenomena are manifested by the brain. Again, if *defective quality* be thus fitted to counteract *size*, in what way, we should like to know, are we to connect mental manifestations with *size*, unless the *relative quality of brains* be previously ascertained. This admission of a collateral hypothesis appears to us to strike at the root of the whole system; for the *affirmative* instances, observed by phrenologists, may after all be really due to the *quality* of the brain; while the *increased size* or physical development, may be an unimportant incident. Phrenologists, we hold, are bound to show that they can in all cases distinguish between the effects of *size* and *quality*, or to admit that their theory of constant coincidence of cerebral development with mental manifestation is based upon a fallacy. They may satisfy *themselves* that the difficulties opposed to their views are entirely removed by this convenient reference to "quality," but this explanation will not be received by others unless it be accompanied by something like demonstration. It is just as probable that *size* has nothing to do with the mental manifestation, as that the "quality" of the brain is "*defective*." Either view may be admitted to explain the facts. Phrenologists adopt one opinion, anti-phrenologists the other. Aristotle would most likely have joined the former; but we verily believe that Bacon, from the harsh way in which he dealt with facts, and the severe tests which he regarded as necessary to proof, would in this case have sided with the latter. Mr. Noble calls phrenology an *inductive* science! In what way does he obtain his inductions in order to show that the quality of brain counteracts the alleged influence of size? Where is the proof? He insists that the premises, *if accurate*, suggest the conclusions of Gall, and we agree in this position: the only question is about the accuracy. It is confessed that the whole of Gall's observations were originally based upon the observation of *size*:—indeed, but for this, it is clear that we never should have heard of phrenology. Now we are told by Mr. Noble that phrenologists "demand an equality in the associated circumstances, regarding mere *size* but as one, though an important element." In our opinion, "defective quality" and "associated circumstances" were only taken up when it was evident that Gall's hypothesis was exposed to numerous exceptions, and that it must inevitably be abandoned unless supported by some unproved and unprovable assumptions!

---

* We totally dissent from this bold statement. We have known "language" possessed in a remarkable degree in one instance in which there was not the smallest development of the phrenological organ in which it is said to reside. We have met with similar conditions with respect to other organs.

Like Dr. Carpenter, we regard Gall's conclusions more as an affair of coincidence than of consequence; and we believe that this localisation of organs and manifestations is as little proved by *facts* as the feats of chiromancy.* The occurrence of coincidences with undue frequency, undoubtedly, as Mr. Noble observes, involves some *law*, but then the coincidences must be clear and decided; and they should, in our view, require no elucidation from the assumption of the existence of specific "quality" or "associated circumstances" only in those cases in which the coincidences fail to support the hypothesis! We are told that Dr. Gall excludes as *evidence* for or against his doctrine any judgment from size in cases of disease, early childhood, old age, or congenital malformation. But why is a person starting with a new hypothesis thus to pick his facts, and take or exclude what he pleases as evidence? Is this the way in which *induction* is carried out in the development of scientific truths? The phrenological system should apply to *all* cases where mind and brain exist, or we do not see how it can be philosophically applied to any. Is it to be admitted that there are periods of life at which cerebral development and mental manifestation begin and cease to have a relation to each other? If so there ought to be some reason for this diversity, or there is good ground for suspecting that the hypothesis is unsound. On this principle we quite agree with Sir David Brewster, and entirely differ from the author who quotes him: "If there be *one distinct and unambiguous exception for which no reasonable cause can be assigned*, the whole doctrine must be at once abandoned. Mr. Noble's only attempt at an answer to this is, that physiology, natural history, and medicine, would have no existence if such rigorous and exact principles of inquiry were applied to them. Our author forgets that he has just before substantially admitted that the coincidences in phrenology occur with such "undue frequency" as to constitute a *law;* and that whether the question relate to phrenology, physiology, or medicine, the moment the existence of a *law* is assumed, it is fairly open to the test proposed by Sir David Brewster, and must stand or fall by the result. Are there are any exceptions to the Newtonian law of gravitation, "that the power of attraction is in a direct ratio to the mass, and in an inverse ratio to the square of the distance?" Was Newton obliged to resort to "defective qualities" in matter—or to make up for defects in his theory by referring to "associated circumstances," or by asserting that *mere mass* was only one element in reference to gravitation? We must remind Mr. Noble, that we are not justified in speaking of a *law* of nature, unless not only do all the facts agree, but the exceptions admit of an intelligible explanation. It is by this test that we try the truths of physiology, natural history, and medicine; and by it, severe as it may appear, phrenology must submit to be tried. It is a poor apology for a science which is called "*inductive*," to say that other sciences re not yet brought to a greater degree f perfection.

---

* The following case furnishes a very good example of the entire want of any certain principles to guide phrenologists in their prognostications. Dr. Spurzheim on one occasion gave *two* very different characters of the *same* individual (a young lady) within half an hour, under the following remarkable circumstances. He was requested to examine the heads of two young ladies, sisters, who so closely resembled each other in person, that the wearing of a cap by one of them was necessary to enable even their parents to distinguish them, and who yet differed considerably in psychical character. The capless young lady, having undergone the doctor's manipulation, left the room, put on her sister's cap, and returned for a second scrutiny, which was made under the impression that the other sister had appeared, and an extremely different statement of her character was then given. Now, either Dr. Spurzheim *intentionally* varied his account *to meet* what he believed to be the difference in *character* between the sisters, or he was unconsciously influenced by the expectation of finding a difference in the developments,—the want of any accurate method of measurement causing him to make an involuntary error in the estimate. Either explanation may be adopted, but the fact, derived from the most excellent authority, indicates (however explained) that the absence of such a method by which fallacies of either kind could be detected, *invalidates all the observations of Dr. Spurzheim*, and leads to the suspicion that in other cases also the process of taking the developments is open to serious error!—*Brit. and For. Med. Quart.* Oct. 1846, p. 523.

We fancy we detect an influence of this kind; *i. e.* from circumstances irrespective of cerebral development, in a case quoted by Mr. Noble at p. 420, in which Mr. Combe, while on a visit to the Dublin Penitentiary, assigned a character to one of the convicts brought before him, No. 1, G. K. "*He probably has been a thief.*" Now, supposing this youth, well dressed, and in a noble mansion, had been presented for examination as a member of a noble family, would this description of character have been given? That a convict, found in a receptacle for convicted thieves, should have probably been a thief, is a statement which, under the circumstances, might be correctly made in nine cases out of ten, without rendering it necessary to search for the organ of acquisitiveness.

In one page we are informed "that ize of organic apparatus, *cæteris pari-us*, constitutes a measure of functional ower" (p. 124); in the next, we are old "that the influence of constitutional *quality* of brain in modifying he ordinary effects of *quantity*," &c. as "to be estimated before the facts an be rightly considered" (p. 125). What we complain of is, that the *eteris paribus* here may mean any ing; and the author gives no rule by which, with any psychological calipers hat we know of, we can determine the pposed influence of constitutional *uality* in modifying the ordinary effects f *quantity*. Who does not perceive hat this is a clever attempt to evade n insurmountable difficulty? If a rediction from quantity fail, the effect must be referred at once to quality; and we are further advised, before we can rightly deal with the so-called facts, to obtain something which is quite unattainable: for neither Gall, nor any of his followers, have, so far as we know, laid down rules for determining "the constitutional quality" of different brains.

In examining the method according to which each organ is stated by Mr. Noble to have been discovered and established, we are bound to say that to us it appears to be neither logically correct or sound in principle. The so-called facts are not sufficiently numerous, and have been too loosely collected, to render them fairly admissible as evidence. All these facts are based on *size*, although mere size, we are told, is only *one* element. Exceptions to these observations appear to us to be kept in the background, while the coincidences are brought prominently forward; and with regard to many of the organs, Gall's instances are so limited in number, that the term induction in reference to the doctrines based upon them is a complete misapplication of language. Mr. Noble is himself sceptical about the existence of the smaller organs situated beneath the superciliary ridge, and states that he is not satisfied with the evidence respecting them: we shall for a similar reason extend the scepticism, which he entertains with respect to them, to all the other organs which have been mapped out upon the cranium.

We cannot help thinking that Dr. Moore has properly designated phrenology in calling it "a rickety science;" and we are tempted to extract from a work recently published by this gentleman, the following passage which attacks the system rather on metaphysical than physiological grounds. It refers to the existence of Will, or Desire, as a principle of action entirely independent of a congeries of cerebral organs.

> "Phrenologists write as if they deemed an organ capable of desiring its own gratification. Desire is never felt without an excitation of organism, but then the individual that is conscious of impression—not instrument—is the subject of desire and gratification. Will is not the action of an organ, but of the soul; and although the habitual indulgence of a passion promotes

the development of that part of the nervous system called into action, it does not follow that a full development shall lead to its full exercise, for otherwise mind has a restraining as well as an exciting power. Even according to phrenologists, the large destructiveness of Spurzheim was controlled by his moral habits or associations; and yet many a man with larger moral organs (to speak phrenologically) and less destructiveness has been a murderer. What does this prove? Certainly not that a man's moral character is decided by the balance of his brains, but by the state of his soul, as regards knowledge and affection. Ignorance and evil habit are not measured by the calipers."

As we have already remarked, Mr. Noble makes as good a defence as the subject will admit of; and we have no doubt his work will prove useful and interesting to those who wish to have a clear and condensed exposition of the doctrines of Gall in their relations to anatomical and physiological science. We may also regard it as the latest and best exposition of the views of phrenologists. He has failed to convince and satisfy us of the correctness of his phrenological opinions; and we think he would have been a more successful advocate had he brought forword the numerical results of his own observations *for* and *against* the connection of cerebral development with mental manifestions, instead of showing the insufficiency of certain objections based on comparative anatomy and pathology, or of resting his arguments for the independent existence of the numerous organs, on the old and very imperfect observations of Gall. His adversaries may be wrong in some of their objections: but this by no means proves that he is right in calling phrenology one of the "Inductive" sciences.

The Blood, Anatomically, Physiologically, and Pathologically considered; with a view to exemplify or set forth, by instance or example, the Wisdom, Power, and Goodness of God, as revealed and declared in Holy Writ. The Warneford Prize Essay for the Year 1845. By C. E. Joseph, M.R.C.S. 8vo. pp. 126. London: Churchill. Birmingham: Marchetti.

The title of this essay, which we have quoted at length, will suffice to indicate the object of the author in treating of the physiological and pathological relations of the blood. The treatise is principally divided into three parts; comprising—1, the blood in health; 2, in disease; and 3, its relations in these two states to natural theology, or as furnishing evidence of the wisdom, power, and goodness of the Creator. Mr. Joseph treats the subject very fully, commencing with the opinions of the earliest medical writers, and giving a sketch of the heart and circulation in all classes of animals. Of course much originality is not to be expected. The materials have, however, been carefully compiled; and the whole of the essay proves that the author has made good use of his time.

Introductory Lecture to a Course of Military Surgery, delivered in the University of Edinburgh, May, 1846. By Sir George Ballingall, Surgeon to the Queen, Regius Professor of Military Surgery in the University of Edinburgh. Cr. 8vo. pp. 23.

During a recent visit to the Continent and elsewhere, Sir G. Ballingall has taken occasion to visit the principal hospitals and medical schools which lay in his route, particularly those of the capital cities of Prussia, Austria, Belgium, France, and Egypt, where large bodies of troops are quartered, and in many of which schools for the special instruction of military surgeons are established. The sketch of these institutions is brief, partly owing to the little time the author could devote to his first visit, and partly from the loss of his notes on the second; still, his narrative, slight as it is, is full of points of interest, especially to military surgeons, and to the conductors of medical schools.

We cannot refrain from quoting a few of Sir George's remarks. He found "that in the barracks of the cadet corps at Berlin, which contains about 320 pupils educating for the army, the fare was coarse, and not over-abundant, while in the hospital were eight young gentlemen labouring under dysentery, one of them in a dangerous state; and this it appears is sometimes a very formidable disease in the establishment." The author is, however, too courteous to suggest the inference which necessarily arises from these facts. In a few years, the occurrence of dysentery and diarrhœa, either in schools, barracks, lunatic asylums, or prisons, will be generally understood to reflect infinite discredit upon the managers of those places, as evidencing a parsimonious and culpable neglect of certain indispensable precautions.

The author mentions observing at Prague numerous bodies of troops at drill, dressed in blouses, or smock-frocks,—a fashion of which he greatly approves, as being well suited to the heat which then prevailed in the month of August. We believe that a similar plan might during the summer months be most advantageously adopted in our own army. The injury which men suffer in very hot seasons and in tropical climates from prolonged exertion, when compelled to remain for hours on foot at reviews and during marches, laden with accoutrements, and with their bodies confined by close and heavy garments, must be extremely great. Loose uniform frocks of white or blue linen would, under such circumstances, be excellent and cleanly substitutes for the thick coats of the infantry, and the braided jackets and heavy furred pelisses of the cavalry.

A frequent, though by no means universal, fault in the Continental hospitals, is their immense size, and the vast number of patients who are congregated in each ward. The Allgemeine Krankenhaus at Vienna is capable of containing upwards of 3000 patients; and many of the wards in the Garrison Hospital at Antwerp are narrow, low-roofed, and inconveniently long, containing from forty to sixty bedsteads. The latter evil also prevails in some of the older hospitals of Paris. In the newly-built "Hospital St. Jean," at Brussels, which has been erected upon a very grand scale, the principal wards are lofty and roomy, each containing twenty-four beds, and the whole capable of containing 600 patients.

At Brussels and Vienna, certain wards appropriated to ophthalmic cases are painted green. Professor Chelius's eye wards at Heidelberg are painted of a grey or light blueish colour.

Our readers are probably aware that there are four *"Hôpitaux d'Instruction"* for the education of young army surgeons in France. The following account of a distribution of prizes at the Val de Grace, one of the principal of these schools, is too interesting to be omitted:—

> "At the Val de Grace, I was invited to be present at the distribution of the prizes to the pupils at the termination of their course, after an inaugural address by Lustreman, the professor of operative surgery. This took place in the principal theatre or lecture-room of the hospital, adorned with busts of eminent surgeons of former days,—hung with drapery and with flags, a guard of honour and a military band being stationed in the adjoining court, and the area of the theatre crowded with general and field officers, wearing on their breasts the badges of successful campaigns. Everything, in short, betokened a becoming respect from the military to the medical department of the army; everything was calculated to make an army surgeon proud of his position, and to encourage him to the faithful discharge of his duties; and there was much to remind me individually of what I look upon as wanting in our own service."—(p. 10).

The brief sketch of the medical school at Grand Cairo will be read with great interest. It is under the auspices of Clot Bey and M. Chederfan. The author believes that upwards of 600 pupils have already been educated here, had passed their examinations, and were attached to the army and navy, or distributed over the provinces. In the obstetric hospital and school of midwifery at Cairo, girls are brought up from the most tender years, employed first in nursing the children born in the institution, and subsequently initiated into the science of midwifery.

Sir George Ballingall's interesting lecture will prove useful to those surgeons who are about to visit the Continent, and will recal many objects of interest to others who have already enjoyed the advantage of an extended professional tour.

Appended to the lecture are two letters on the necessity of organising schools of instruction for military and naval surgeons. Most of the arguments contained in these letters appear to us to be extremely judicious.

An Easy Introduction to Chemistry. By GEORGE SPARKES, late Madras Civil Service. Sm. 8vo. 2d ed. pp. 182. London: Whittaker and Co. 1846.

THIS work has the somewhat rare merit of exactly corresponding to its title. It is an *easy* introduction to one of the most interesting of sciences. In a series of chapters, in which general principles are concisely handled, and special details are only so far gone into as to admit of safe practical application, the author contrives to convey a large amount of useful information on the present state of chemistry. In treating the subject he inverts the order usually adopted by modern chemical writers, and commences with the examination of common and familiar substances, such as the metals and metallic oxides. Perhaps this, although not the most correct arrangement, is the best way of dealing with a beginner: it tends to fix his attention, and to bring out his powers of comparison with regard to the properties of substances upon which he may have already acquired some rudimentary knowledge. Long discussions upon light and polarization, heat and diathermancy, electricity and magnetism, which are conventionally introduced as incipient chapters into most treatises on chemistry, are rather apt to embarrass the student; and, from the diffuse manner in which they are often treated, are, in our opinion, quite out of place in works professedly devoted to chemical science.

Mr. Sparkes' "Introduction" is concisely written, the experiments are well selected, and the description of dangerous processes is altogether omitted. We have here therefore sufficient to justify us in recommending this little volume as a safe and useful guide to the beginner.

The Moral Aspects of Medical Life. By JAMES MACKNESS, M.D. 8vo. pp. 348. London: Churchill. 1846.

THE author of this treatise, being struck with the entire absence of modern works on medical ethics in English literature, had proposed to himself to publish a translation of the "Akesios" of Professor Marx, a notice of which has already appeared in this journal; but he considered that it would be more acceptable to the English reader to work out the plan of the author, by bringing together the scattered observations of various English writers in the form of illustrative remarks. The letters of Professor Marx, addressed to twelve eminent professional men, long since deceased, partly Englishmen and partly foreigners, are here translated. Each is preceded by a short biographical memoir of the individual, and followed by Dr. Mackness's comments. The work, therefore, properly consists of two parts—a translation from the German, and a collection of ethical rules and observations, in part original, and in part derived from medical writers.

We regret that, from what we have read, we cannot speak well of the translated portions. The letters not only *appear* to be translations, but the meaning of sentences is often rendered confused by the adoption of an Anglo-German idiom and bad punctuation. We shall take at random one sentence commencing a paragraph from the life of Dr. Lettsom:—

> "As children without a thought of deceit, in order to practice themselves in speaking and thinking, relate something as happened which they have not experienced, many writers employ their pen in this manner." (p. 150).

We might quote other sentences equally obscure, and equally displaying, through the English text, their Teutonic origin. This is a blemish not so apparent, perhaps, to the translator, whose mind is full of his author's meaning, as to the reader, who soon becomes wearied with sentences which require so much unravelling to be rendered intelligible. With respect to the additions made by the author, the short biographical memoir attached to each life will be found interesting. The author's comments on Professor Marx's letters, although they present nothing very striking, are marked by good sense, and contain advice which might be profitaby followed by many medical practitioners. Of late years more attention has been given to politics than to ethics; but there can be no question that the true mission of a physician will be found in the cultivation of the latter,—in a strict and conscientious performance of his duties, not only to his patients, but to his brethren in the profession.

Medical Trials and Inquests.

CENTRAL CRIMINAL COURT.

Thursday, October 29th.

OLD COURT.

(Before the Chief Baron and Mr. Justice Erle.)

DEATH FROM DELIRIUM TREMENS FOLLOWING SLIGHT PERSONAL INJURIES: CHARGE OF MANSLAUGHTER.

Richard Heywood, Henry Boddy, and William Branch, three young men of respectable appearance, surrendered to take their trial upon an indictment charging them with the manslaughter of John Harold Lovett, by assaulting and beating him, and casting him against the tailboard of a cart, thereby causing a mortal concussion of the nerves, of which he died.

Mr. Serjeant Shee and Mr. Huddlestone conducted the prosecution; and Mr. Clarkson, with Mr. Bodkin and Mr. Ballantine, appeared for the defendants.

The circumstances under which this charge was made were as follows:—It would seem that on the 15th of September, two men, named Hall and Brennan, were to run a match of a mile distance on the Barking road, and the prisoners, who it appeared took some interest in the race, were on the spot with a phaeton, of which Heywood was the driver, and they endeavoured to prevent persons who were on the road from pressing on the men in the course of the race. The deceased happened to be upon the road at the time on his way home; and it seems that he endeavoured to force his way past the phaeton, which caused Heywood to cross him from one side to the other to prevent his doing so. This irritated the deceased, and he struck Heywood with his whip: the latter returned the blow, and they continued whipping at each other until the conclusion of the race, when Lovett drove off; and it appeared that Heywood galloped after him, and coming up with the cart of the deceased the scuffle was renewed, and Boddy got out of the phaeton, jumped into the deceased's cart, and commenced an attack upon the deceased, in which he was afterwards joined by the other prisoners, all of whom were proved to have assaulted the deceased; and when they left him his face was covered with blood, and he appeared to have received a good deal of injury. It appeared that at the time of the occurrence the medical gentleman who was called in treated the case as one of an ordinary assault, not likely to be attended with serious consequences, and the deceased was sent home, when, very shortly afterwards, symptoms of *delirium tremens* came on, and he died on the following Monday morning. Upon the cross-examination of the witnesses, it was admitted that the deceased had himself made the first assault, by striking Heywood with his whip when he attempted to prevent him driving by to incommode the men who were running the race; and also, that he put his fingers to his nose in a derisive manner as he drove by them after the race, and this, it appeared, induced them to follow him. It likewise appeared that when the prisoner Boddy was endeavouring to get into the deceased's cart, the deceased struck him, and that the other prisoners only interfered to prevent him from being afterwards thrown out of the cart, when he and the deceased were struggling together. The deceased, as above stated, died a few days afterwards, although the actual injuries he received appeared to have been of a very slight description, and the precise cause of the death became a material question in the inquiry.

Mr. W. Coulson, surgeon, of the Old Jewry, deposed that he was called upon to attend the deceased on the day after the transaction; the face was very much swollen and black, particularly on the right side, and there were also two wounds on that side of the face. He did what was necessary at the time, and the next day he removed the dressings that were upon the wounds, and found that they were nearly healed. The deceased appeared to suffer from great tremulousness and weakness, and these constitutional symptoms continued to increase, although the wounds were rapidly healing, and in fact getting quite well, and the swelling had nearly subsided. On the Friday before his death the deceased talked in a rambling and incoherent manner, and exhibited the ordinary symptoms of *delirium tremens*. The deceased was brought to the house in a cab on the Saturday, and he then appeared quite as bad as the day before. He saw him on the following day, when he was in the same state, and died in a few hours afterwards. In witness's opinion the death was attributable to a shock of the nervous system causing *delirium tremens*, and he accounted for that shock by the attack made upon the deceased, and the blows he received. He afterwards made a *post-mortem* examination, but could not discover any fracture of the skull, or of the bones of the face, or a rupture of any blood-vessel. The right lung was very much congested, and there were some old adhesions to the chest. The left lung was also congested. The heart was large and flabby, but he did not discover any thing in the appearance of the body to account for the death, other than a confirmation of his original opinion that it arose from *delirium tremens*. He considered that this arose from the attack made on the deceased, but he was certainly surprised to see so fatal a result from such slight injuries. By the COURT.—He considered the blows the deceased had received were the exciting cause of *delirium tremens*. It was generally the result of violent injury, but he had known it follow from very slight blows. By Mr. CLARKSON.—He should say, from the appearances he observed on the *post-mortem* examination, that the deceased was "a bad subject." The injuries the deceased had received were certainly not sufficient to account for the death of a healthy man. The shock to the system might have been produced by the deceased's excited condition, and *delirium tremens* might be occasioned by excitement alone. The skull of the deceased was remarkably thin, and if any great violence had been practised towards him he should have expected to find it fractured. Excitement might certainly produce *delirum tremens*; but, as there had been blows in this case, he thought it more natural to ascribe it to them, than to the mere excitement of the deceased. If the system of the deceased had not been in so bad a state, he did not think the result would have been so serious, but he certainly considered the blows the exciting cause of death. The CHIEF BARON asked if he was right in understanding the witness to allude to the moral effect of the blows, to the excitement they occasioned on the system, rather than to the actual result that might reasonably be expected from injuries of such a character? Mr. Coulson said that was what he intended to convey by his statement. By Mr. CLARKSON.—He would not undertake to say that the deceased would not have died from the excitement, even if he had not received any blows at all. By Mr. Serjeant SHEE.—The blows and the excitement together were, no doubt, the cause of death.

Mr. Giles, another medical gentleman, gave similar testimony, and, in answer to a question from Mr. CLARKSON, he said that in his opinion the deceased's death was the result of his excited state, and that *delirium tremens* was thereby occasioned, and not by the blows he received. He described the liver and kidneys of the deceased as exhibiting the appearance of those of a person addicted to drinking spirits or beer.

Mr. Richard Lovett, the father of the deceased, deposed that when he left him on the day in question he was in perfect health, and he said he had not had a day's illness for four years. He was a very strong young man, and particularly abstemious in his habits, so much so that frequently he would not even drink a glass of wine after dinner.

A witness named Clark was then examined, who, in answer to a question from Mr. CLARKSON, said that the deceased attempted to force his way along the road, and that he committed the first assault. This closed the case for the prosecution.

Mr. CLARKSON then addressed the jury on behalf of the prisoners, and in the first place called their attention to the want of anything like distinct proof of the actual cause of the death of the deceased; and he then proceeded to contend that even if the jury should be of opinion that the death was the result of the assault committed by the prisoners, that, under the circumstances, the offence only amounted to an assault, and that there was no evidence to justify a conviction for manslaughter.

A number of respectable witnesses gave the prisoners an excellent character for humanity and general good conduct.

The CHIEF BARON then summed up; and the jury, after a short deliberation, found the prisoners *Guilty* of assault, and they were ordered to be imprisoned in Newgate for three months.

FREE TRADE IN POISONS.—DEATH OF AN INFANT FROM AN OVERDOSE OF OPIUM ADMINISTERED BY A CHILD.

ON Monday last, an inquest was held, at Codnor Park, Derbyshire, on the body of Sarah Wardle, a child aged four months, whose death took place on Saturday morning last from the effects of laudanum administered the day before by her nurse-girl, a child named Elizabeth Parker, aged 12 years.

From the evidence which was taken before the jury, it appeared that the nurse-girl had sent another girl for a pennyworth of laudanum on Friday morning, and that she had poured half of it down the child's throat; and, in about half an hour afterwards, she took it home; and the mother of the child asked the nurse if she had given the child anything, to which she replied she had only given it two teaspoonfuls of ale at the brewhouse of Mr. Whysall. The child appearing to get much worse, a medical man was sent for; and on arriving at the house where the child was lying, after making several inquiries, the nurse-girl again repeated to him that she had given the child some ale, but denied having given it anything else, until after the child's death, when she admitted having sent a child for some laudanum in a small bottle, and having poured part of the contents down the child's throat, and also having washed off the label from the bottle which contained the word "poison" upon it. The child also told one of the witnesses, who was examined, that a companion of hers, who was a nurse-maid, had bought a pennyworth of laudanum, and had given the same to the child she was nursing, overnight, and that it was dead next morning!

The jury, after consulting a short time, returned a verdict of "Wilful murder" against Elizabeth Parker, as it appeared from the evidence of the medical gentleman that the death was occasioned from laudanum; whereupon the coroner issued his warrant for the committal of the nurse-girl for trial at the next assizes.

⁂ So long as pennyworths of laudanum are sold to mere children, such cases as the above must occur. In our opinion, the vender of the drug was the more guilty person; and, in any country but England, we believe that this individual would have been punished under the circumstances. The Malthusian views which appear to prevent our legislators from interfering in such matters, confer impunity upon the venders of poison, even when it is not procured for "destroying rats," and when the age of the applicant would show that it was not likely to be required for any reasonable or lawful purpose.

CASE OF POISONING BY OPIUM.—LAUDANUM SOLD BY MISTAKE FOR TINCTURE OF RHUBARB.

On the same day, an inquest was held, at Crich, on the body of Ann Tomlinson, aged 72 years, whose death took place the day before from the effects of laudanum, administered by mistake for tincture of rhubarb.

From the evidence given before the jury, it appeared that the deceased had gone for some tincture of rhubarb, and that the person she applied to unfortunately gave her laudanum; but, on discovering the error, immediately afterwards applied proper remedies to remove the laudanum, and medical aid was immediately sent for, but without effect, death taking place in about sixteen hours after the laudanum was taken. The evidence also showed that the death of the deceased took place from general decay of nature, accelerated by the laudanum. The jury returned a verdict to that effect, accompanying it with the remark, that the laudanum was wholly given by mistake, and without any intention to take away life.

⁂ We doubt whether "the general decay of nature" would account for the death of the deceased so satisfactorily as the laudanum administered by mistake.

This and the case of the child Carey will show the very lenient view which juries are inclined to take of such deplorable instances of ignorance and neglect.

AN INFANT POISONED BY TWO DROPS OF LAUDANUM ADMINISTERED BY A NURSE.

An inquest was held on Thursday, October 15th, *before A. H. English, Esq. Coroner for Bath, on the body of a male infant*, aged five days, the child of a man named Carey, which died from the effect of two drops of laudanum, administered to it by its nurse.

Mr. G. King, surgeon, deposed that Mrs. Carey was delivered on Friday night, about ten o'clock, of a fine healthy boy; he saw the mother and the child the next morning, Saturday, and on Monday, both going on well. On Wednesday morning, about eight o'clock, he was sent for by Mrs. Carey to say that her baby was very ill. On his arrival he found the child in the nurse's arms in a dying state. The mother stated that the nurse had given it two drops of laudanum about three o'clock in the morning. Witness recommended a cold bath for the child; the parties demurred about it, when Mr. King himself plunged it into a tub of cold water, which revived it, and it cried; it afterwards relapsed. Mr. King continued to attend until its death, which took place at nine o'clock in the evening, the cause of which, he believed, was an over dose of laudanum.

Mrs. Edgar, a neighbour, was next examined. She was present at the birth, and had seen the child every day since; heard no complaint of its being ill; thought it a very healthy child.

There being no other evidence, the coroner thought that there should be a *post-mortem* examination, as it would be satisfactory to the jury to know that there was no other cause of the death of the child. The inquiry was adjourned till the following evening, to admit of a *post-mortem* examination.

It was then deposed by Mr. King, that, in compliance with the coroner's order, he had made a minute examination of the brain, the stomach, and bowels, which were all in a perfectly healthy state: there was no smell of opium in the stomach; he was assisted in the examination by Mr. Cox. Mr. King was asked if, after the *post-mortem* examination, he saw no reason to alter his evidence given yesterday? No; he was still of opinion, from the symptoms during life, that the child had died from the effects of some powerful narcotic poison, which he believed to be opium, he having been told that two drops of laudanum had been given, and this, in his opinion, was enough to cause the death of of a child five days old.

The father of the child was then examined. He knew nothing of the circumstance until the child was dying; he had found a bottle with about two drachms of laudanum in it in the bed-room, which his wife told him was the one the nurse took it from. It had been in the house eighteen months. Mr. King examined it, and, from its having been in the house so long, considered it to be stronger than if it had been fresh bought; the spirit had gone off and left the opium.

The Jury returned the following verdict:—

"That the child died from the effects of two drops of laudanum administered to it by the nurse, and, having frequently been attended with good results, through good intent; that is to say, *Excusable* Homicide!"

The nurse had before administered laudanum to children to ease their pains. The Coroner considered the verdict in direct opposition to the law as held by authorities referred to by him in summing up, and adjourned the inquiry till Saturday evening, when he agreed to receive the verdict; and, after an admonition and caution to the nurse as to her future conduct, the jury were dismissed."—*Provincial Medical Journal*, Oct. 28.

Correspondence.

ON THE TREATMENT OF CASES OF ALLEGED PLEURO-PNEUMONIA.

Sir,—I beg to offer a few remarks on the case of pleuro pneumonia, lately reported in the Medical Gazette, by Mr. H. Smith, and stated to have been successfully treated without venesection. My attention has been specially directed to this form of disease ever since it set in about the middle of May last. According to my view, however, the disease in question was not an idiopathic pleuro-pneumonia, but a complication of the common continued fever, as may be deduced, I think, from the following circumstances — the order of accession of the general and local symptoms, the limited tolerance of venesection, and the appearances of the blood when cooled, not to speak of the history of its rise, progress, and termination, if yet it can be said to have terminated. At first, that is in May and June, the complication was more of a bronchitic (usually confined to one or both of the lower lobes), or pneumonic character, and only latterly, that is in July, August, and September, did it become decidedly pleuritic. Of about 16 cases in all, none were fatal; but in August and September I had an opportunity of being present at the autopsy of two. In both there was empyema; in one, accompanied with an exulcerated state of the pleura costalis and intercostal muscles; and in another, with pericarditis, endocarditis, and purulent infiltration of the lower lobe of the same side, extending for about half an inch from the surface.

The disease invariably set in with a distinct shivering fit, or rigor, which lasted about half an hour, and was followed, either immediately, or, as was much more frequent, *in from 12 to 36 hours*, by acute catching or *lancinating pain* in some part of the chest or *side*. The skin was then hot; tongue much loaded, and pulse from 97 to 120 or upwards. At this time there were either no physical signs, or these were not very easily appreciated. Generally it was from the 3d to the 5th day before either these or the sputa gave any clear indication.

In all, the tolerance of venesection was comparatively low; two or three, indeed, became faint on the loss of a few ounces, but latterly particularly, or during the pleuritic period, it was higher; 12 to 16 ounces were then usually drawn the first day. This on cooling became slightly cupped, or at least turned up a little at the edges, and slightly buffy, but on the 2d or 3d day, when repeated, as it sometimes was from 8 to 12 ounces, the clot remained quite flat, and was covered with a thick leathery buff about a quarter of an inch thick. These appearances I looked upon as quite characteristic. None were bled a third time either generally or locally. The grand remedies were calomel, antimony, and opium, alternately with saline mixture, antimonial wine, &c. during the fever, or till the mouth became sore; then mucilage, antimonial wine, and compound tincture of camphor, or quinine with spiritus etheris nitrici, &c. I here subjoin only one,—the first case.

May 15th, 1846. — W. D. ætat. 19, choleric temperament, and stout healthy frame. Complains of pain under the right scapula, and general soreness, which he reports to have commenced the evening before last with rigor. Skin hot; tongue brown, much loaded; bowels were confined, pulse 144, with a slight thrill; respiration much higher on the left than the right side; no râle. Has had an emetic and cathartic.

V. S. ad ℥xij. Pulv. Purg. Solut. Tartarizati (Epsom salt and Tartar Emetic), ℥ij.; 2da q.q. horâ.

Vespere. — Became faint at 10 o'clock; clot slightly buffy but flat, not separated from the vessel. Has vomited once; pulse 92.

Cal. gr. iv. h. s.

16th. — Countenance flushed, with an expression of prostration and distress; skin hot; tongue brown and dry; pulse 92.

Contr Solut.

17th. — Complains much of debility; skin hot; pulse 96; respirations 3 ; panting murmur on the right side comparatively feeble, with slight sonorous râle on forced inspiration. No deficiency of resonance.

Calomel, gr. iij.; Ant. Tart. gr. j.; Opii, jss. 4ta q. q. h.

Vespere.—Vomited ten minutes after the first pill, an hour after the second: not after the third. Skin moist; pulse 92.

Mist. Salin. Diaph. ℥j. vice alternâ c. pil. (Alternatim 2da q. q. horâ.)

18th.—Complains much of prostration, anorexia, and general soreness. Face still flushed; skin hot and moist; tongue furred; pulse 92; respirations 36; coughs now with rusty frothy expectoration. Cont. Pil. et Mist.

19th.—Cheeks still flushed, and a dark shade under left eye. Indistinct murmur in right subclavian region, with dulness on percussion. Fuller in mammary and subscapular, but in last with occasional sonorous mucous râle. Cont.

20th.—Skin warm, perspiring; tongue rough and brown, but moist; pulse 84; respirations 24; expectoration copious; frothy on surface, tenacious and rusty below, not nummulary. Marked dulness on percussion in right subclavian region; feeble murmur, and muco-crepitous rale. Murmur sharp in right mammary and subscapular: comparatively full over all the left chest. Empl. Lyttæ subclav. dext. Cont. alia.

21th.—Gums sore; skin cool, soft; pulse 70; respirations 22; murmur in right subclavian region quite distinct, but mixed with crepitous râle. Cont. Pil. j. q. q. nocte. Mist. ut antea.

22d.—Still dulness in right subclavian region, but murmur as distinct as on opposite side. Expectoration thick, knotty, and without rust; skin cool; pulse 56. Mist. Expect. &c.

June 1st.—Discharged.

R. H. A. Hunter.
Surgeon 57th Regiment.

Canterbury, Oct. 27, 1846.

N.B. See also a Report on a very fatal epidemic of the same nature, in the "Transactions of the Bombay Medical and Physical Society," No. iii. p. 183.

Medical Intelligence.

UNIVERSITY OF LONDON.

B.M. SECOND EXAMINATION. PASS EXAMINATION.—1846.

Monday, November 2.—Morning, 10 to 1.

PHYSIOLOGY.

Examiner—Prof. T. Rymer Jones.

1. Describe the Duodenum, more particularly with reference to the minute structure and functions of its different coats; the nature of the secretions which are poured into the intestinal canal at this part, and their influence on the *process of digestion.*

2. *State the properties of Chyle, and point out the differences between the composition of that fluid and of the blood.*

3. *Describe the urinary secretion,* its origin, chemical composition, and importance in the animal economy.

4. Give a brief account of the sympathetic system of nerves, and define the functions ever which it presides. What is its general arrangement in the different classes of Vertebrate animals, and how is it represented among the Invertebrata?

5. What is the source of Fat, and what are its uses in the human œconomy?

6. Describe the circulation of the blood through the capillaries at the periphery of the body, and the agencies by which it is sustained.

7. Give an account of the action of the heart, and its effect in aiding the circulation of the blood. Likewise compare the human heart with that of a Bird, a Reptile, and a Fish.

Afternoon, 3 to 6.

General Pathology, General Therapeutics, and Hygiene.

CELSUS DE RE MEDICA.

Examiners, Dr. Billing and Dr. Tweedie.

1. Explain the term Atrophy. Mention its causes, and show how they operate in producing either general decay, or atrophy of particular organs or tissues.

2. Enumerate the principal remedies employed as Diuretics. Explain the different modes by which they are supposed to operate, and the circumstances by which their selection should be determined.

3. In what forms of disease is change of climate advisable either as a prophylactic or curative measure? Specify the different European climates that have been recommended with the view of arresting the progress of pulmonary diseases.

4. Translate into English the following passage:

Quem interdiu vel domestica vel civilia officia tenuerunt, huic tempus aliquod servandum curationi corporis sui est. Prima autem ejus curatio exercitatio est, quæ semper antecedere cibum debet: in eo qui minùs laboravit et benè concoxit, amplior; in eo qui fatigatus est, et minùs concoxit, remissior. Commodè verò exercent, clara lectio, arma, pila, cursus, ambulatio; atque hæc non utique plana commodior est; siquidem meliùs ascensus quoque et descensus cum quâdam varietate corpus moveat, nisi tamen id perquàm imbecillum est: melior autem est sub divo quàm in porticu: melior, si caput patitur, in sole quàm in umbrâ: melior in umbrâ quam parietes aut viridaria efficiunt, quàm quæ tecto subest; melior recta quàm flexuosa. Exercitationis autem plerumque finis esse debet sudor, aut certè lassitudo quæ citra fatigationem sit; idque ipsum modò minùs, modò magis faciendum est. Ac ne his quidem, athletarum exemplo, vel certa esse lex vel immodicus labor debet. Exercitationem rectè sequitur modò unctio, vel in sole vel ad ignem; modò balneum, sed conclavi quàm maximè et alto et lucido et spatioso. Ex his verò neutrum semper fieri oportet, sed sæpiùs alterutrum, pro corporis naturâ. Post hæc paulùm conquiescere opus est. Ubi ad cibum ventum est, nunquàm utilis est nimia satietas; sæpè inutilis nimia abstinentia: si qua intemperantia subest, tutior est in potione quàm in escâ. Cibus à salsamentis, oleribus, similibusque rebus meliùs incipit: tùm caro assumenda est, quæ assa optima aut elixa est. Condita omnia duabus de causis inutilia sunt, quoniam et plus propter dulcedinem assumitur, et quod modo par est, tamen ægriùs concoquitur. Secunda mensa bono stomacho nihil nocet: in imbecillo coascescit. Si quis itaque hoc parùm valet, palmulas pomaque et similia meliùs primo cibo assumit. Post multas potiones, quæ aliquantùm sitim excesserunt, nihil edendum est: post satietatem, nihil agendum. Ubi expletus est aliquis, faciliùs concoquit, si quicquid assumpsit, potione aquæ frigidæ includit: tùm paulisper invigilat, deindè benè dormit. Si quis interdiù se implevit, post cibum neque frigori neque æstui, neque labori, se debet committere: neque enim tam facilè hæc inani corpore quàm repleto nocent. Si quibus de causis futura inedia est, labor omnis vitandus est. —*Celsus*, Lib. I. Cap. ii.

Tuesday, Nov. 3.—Morning, 10 to 1.

Surgery.

Examiners, Sir STEPHEN HAMMICK and Mr. CÆSAR HAWKINS.

1. What are the local and constitutional effects of burns and scalds, of different degrees of severity? Describe the treatment, local and general, which may be necessary in the several stages of these injuries, from their reception to a period subsequent to their cicatrization, or to a fatal termination.

2. Describe the symptoms and appearances of a Popliteal Aneurism, in its various stages, from its commencement to an advanced period of the disease; give the old and new methods of operating, saying which you prefer, with your reasons for such preference.

3. Enumerate and give a description of the nature and symptoms of the diseases and injuries for which the operation of Paracentesis Thoracis is necessary; describe the method of performing the operation, with the subsequent treatment, both locally and generally; detail the appearances which you expect to find, on an examination of the chest and its contents, where the case terminates fatally.

Afternoon, 3 to 6.

Medicine.

Examiners, Dr. BILLING and Dr. TWEEDIE.

1. Describe the symptoms observed in an apoplectic seizure, and the circumstances which indicate a favourable or an unfavourable result. Sketch the morbid appearances in fatal cases.

2. Specify the diseases to which the windpipe (larynx and trachea) is liable. Give the diagnostic symptoms and treatment of each.

3. Mention the more important complications of acute rheumatism, and the symptoms by which they are recognised. Sketch the treatment—1. of acute rheumatism, and 2. of its complications.

4. Describe the diseases to which the œsophagus and the cardiac and pyloric orifices of the stomach are liable. How are they to be distinguished from each other?

5. Give the anatomical characters of acute pleurisy, its general and physical signs, and an outline of the treatment.

6. Describe the various forms of scarlet fever, and the treatment applicable to each.

Wednesday, November 4.—Morning, 10 to 1.

Midwifery.

Examiner, Dr. RIGBY.

1. Describe the changes which the os and cervix uteri undergo in the different months of pregnancy.

2. Describe the results of examination per vaginam in retroversion of the gravid uterus.

3. Describe the symptoms of abortion, and your treatment of them.

4. What are the rules for treating prolapsus of the cord?

Afternoon, 3 to 6.

Forensic Medicine.

Examiners, Prof. BRANDE, Dr. PEREIRA, and Dr. RIGBY.

1. In a case of poisoning by corrosive sublimate, how would you discover its presence in the contents of the stomach; and in the event of its having entered into some insoluble state of combination, how would you separate, or reproduce and recognise it?

2. What tests would you apply for the detection of the presence of opium in any liquid supposed to contain it; and how would you proceed to search for and distinguish opium in the contents of the stomach, supposing it to be blended with and disguised by other organic matters?

3. Describe the symptoms, morbid appearances, and appropriate treatment of poisoning by arsenious acid and bichloride of mercury.

4. Describe the symptoms and treatment of poisoning by belladonna.

5. Describe the difference between the os uteri of a primipara and of a multipara.

6. Enumerate those signs of pregnancy by which you can safely take your oath before a court of justice that pregnancy exists.

CONTAGIOUS DISEASES PREVENTION ACT.

We are glad to find that medical practitioners in various parts of the country are actively engaged in enforcing the provisions of the Act passed in the last session for the prevention of contagious diseases, and the removal of nuisances. The following case was recently brought before the magistrates at the Greenwich Police Court. Mr. Fenton appeared to answer an information laid against him, by direction of the Churchwardens, Overseers, Board of Governors and Directors of the parish of St. Alphage, Greenwich, under the 9th and 10th Victoria, c. 96, for having on his premises a quantity of noxious and offensive matter, prejudicial to human health. Several witnesses were examined, who proved that the defendant had from time to time collected a large quantity of ashes, decayed vegetables, and other noxious substances, on a piece of vacant ground near the Trafalgar Road, which emitted a most offensive and unwholesome effluvium. Certificates were produced from Mrs. Bradley and Sturton, surgeons, expressing their opinion that this accumulation of offensive matter was likely to be injurious to the health of the inhabitants. After hearing the defence, Mr. Traill said he would issue the order he was empowered to make under the act, requiring the defendant to remove the nuisance in two days. If he failed to do so, an order would be given to the complainant to remove the obnoxious matter at defendant's expense; and, if the defendant offered any obstruction to the execution of that order, he would render himself liable to a penalty of £10.

ADVANCE OF THE ASIATIC CHOLERA TOWARDS EUROPE.

According to the latest intelligence received from Trebizonde (Sept. 26th), a town on the south-eastern shore of the Black Sea, it appears that the Asiatic cholera is slowly but steadily progressing in the course towards Europe which it took in 1830-31. We subjoin the following extract:—"The cholera has passed the line of the Russian quarantine on the borders of the Caspian Sea, and is raging throughout all the Tartar villages of the districts of Salgau and of Deukeran. A considerable number of Cossacks forming the *cordon* on the Persian *frontier have likewise been attacked. At Rescht, a Persian city in the province of Ghilan, the cholera is still making incessant ravages, which have now continued during* two months. The sanitary state of all the towns to the west of the Caspian Sea, from Bakou to Astrachan, is very unfavourable. Dysenteries and diseases of the stomach (frequently mortal) prevail in these towns, particularly amongst the troops in the garrisons. These maladies are probably the forerunners of the real Asiatic cholera, a phenomenon rather curious, which has been again observed latterly in Persia. There prevailed at Teheran, at Astrabad, at Meschid, and at Ispahan, a malady a considerable time before the appearance of the cholera, of which the symptoms resembled the Indian disease. The caravans which arrived from Teheran eight months since, spoke of the existence of the scourge, which was mistaken for the cholera. A French physician, who resided at Teheran at that period, and who passed through our city a few days since, assured us it was the cholerine, such as had likewise been observed in several towns in Europe in 1832 as a precursor of the cholera. The population of Teheran, which had been estimated at 80,000, is reduced by the ravages of the cholera to 60,000. The Foreign Ministers and their attendants had not dared to return to the city, but still continued to reside at Mount Alburs, in the neighbourhood of Schemen, to the north of Teheran. The Russian authorities at Tiflis are well aware of the appearance of the cholera in that neighbourhood, and the inhabitants of Tiflis have fled; but, up to the 12th of September, no official announcement had been made of the fact. Perhaps this course was pursued in order to prevent the merchants from becoming alarmed, and a consequent interruption of commercial affairs."—*Times.*

If our readers will refer to our number for Aug. 21, p. 341, they will find an account of the progress and mortality of this disease on its first invasion. In the autumn of 1830 it was ravaging the Persian province of Ghilan, the Georgian provinces of Russia, including the towns of Bakou, Tiflis, and Astrachan; and it appeared in England in the autumn of the following year.

EPIDEMIC DYSENTERY AT MECHLIN.

Dysentery of a very fatal character is prevailing to a great extent in Mechlin and its neighbourhood. The medical men are not in sufficient number to render the necessary assistance to the inhabitants. It is reported that in the village of Lippeloo, with a population of only 500 persons, there have been no less than 109 deaths. More than one-fifth have been cut off by the disease. At St. Amand the burgomaster and four individuals living with him died from the disease at a few days' interval. This town is only four leagues from Brussels. Dysentery is also spreading at Londerzeel.

The deaths from this disease in London during the last week were only five (in a population of nearly two millions), and three of these occurred among infants.

OBITUARY.

On the 18th ult., at Thornbury, in his 91st year, Joseph Hume, Esq., for many years a scientific and practical chemist in London, and corresponding member of most of the learned societies of Europe. Mr. Hume was well known as the discoverer of an improved method of detecting arsenic. He first introduced what is called the silver test, which is still designated Hume's test, and is much employed by toxicologists.

On the 29th ult., in Upper Gower Street, George Mann Burrows, M.D. F.L.S., in the 76th year of his age. Dr. Burrows has been long known to the profession as the author of an excellent practical treatise on insanity.

On the 29th ult., Richard Martin, Esq., surgeon, of Chatham, Kent.

On the 25th September, at Grenada, in the West Indies, Henry Shore, Esq., surgeon, formerly of Sheffield.

On the 29th ult., Mr. Honeywood, surgeon, of Queen Street, Cheapside, in the 55th year of his age.

Lately, in Paris, M. Poirson, late Chief Surgeon of the Military Hospital of Gros Caillou, Member of the Royal Academy of Medicine, and Knight of the Legion of Honour.

Lately, at Bordeaux, Dr. Dupuch Lapointe, General Secretary of the Medical Society, and Honorary Professor in the School of Medicine of that city.

Selections from Journals.

OPHTHALMOLOGY.

ON INFLAMMATION OF THE MEMBRANE OF THE AQUEOUS HUMOUR OF THE EYE.

BY DR. ALEXANDER WATSON.

Inflammation of the serous membrane which encircles the aqueous humour of the eye, is alluded to by Dr. Wardrop only as a highly probable occurrence, in the first volume of his essays; but is more fully described in the second volume, as also in the fourth volume, of the Medico-Chirurgical Transactions. Still, Dr. Watson considers the accounts of the disease there given are imperfect, and the modification about to be described is not mentioned. This disease we find afterwards described by Baron von Rosas, of Vienna, under the name of *kerato-iritis.* Allusion has also been made to this disease by Mr. Lawrence, Mr. Tyrrell, and Dr. Mackenzie, who describe it as a "rare ophthalmia," under the title of *aquo capsulitis.* In the year 1825, the author submitted to the Medico-Chirurgical Society of Edinburgh a short account of an affection of the eye, under the name of chronic inflammation of the iris, which was afterwards published in the Transactions of the Society (vol. ii.) He adopted this name, because the most obvious morbid changes were observed in the iris, although he at the same time stated it to be his opinion that the disease might rather be considered to be an affection of the membrane of the aqueous humour. The disease which he described in the essay referred to, consisted in chronic inflammation affecting the more delicate internal parts of the eye, producing effusion of lymph in the chambers of the aqueous humour, followed by irregularity in the form and contraction of the pupillary aperture of the iris, accompanied by loss of sight to a greater or less degree, according to circumstances. The complaint was also described as insidious in its invasion, slow in its progress, and, in the cases which he had seen (which had been of old standing), intractable in its treatment. It also showed the analogy which existed between this and inflammation of the serous membranes of other parts of the body. Since that time he has had many opportunities of verifying his remarks, but, by the use of improved glasses, he has been of late enabled to extend his observations. In the present communication, the author describes a frequent and interesting modification of the disease, attention to which is of much practical importance; for if, on the one hand, it is detected in its early stages, it may be completely cured; while on the other, if it is allowed to proceed without being recognised, and proper remedies applied, it is certain to terminate in causing great imperfection of the sight, or in producing complete blindness. The author has selected three cases to illustrate this form of disease. The appearances observed in one of these may be given as illustrative of all.

A female, aged 23, of fair complexion, with yellow hair, and rather delicate appearance: complains of great dimness of sight, which prevents her from being able to read. The cornea of both eyes (but especially the right) is a little hazy, or slightly opaque, opposite to the lower part of the pupil. When examined with a magnifying glass, the opacity is seen to be caused by small, distinct, opaque points, producing a dotted or mottled appearance. These opaque spots appear to consist of lymph on the inner surface of the cornea. Pupils somewhat irregular in form, and have some adherent points to capsule of lens. Some deep-seated redness, forming a zone around the cornea, but no pain. States that her eyes have been weak for several years, during which time they have often been slightly inflamed. During the last two months her sight has become more affected than formerly, and now she cannot see minute objects, and sees very indifferently to go about.

In the instances detailed, the disease was of a chronic character, and was obviously confined chiefly to the membrane lining the chambers of the aqueous humour, affecting those parts which cover the interior of the cornea, the iris, and capsule of the lens. This was manifest from the effusion of small portions of lymph on these parts, causing the mottled appearance of the cornea and the irregularity of the pupil. In other cases of this disease, particularly in young subjects, the symptoms are more acute, and other parts of the organ partake of the inflammation, such as the choroid coat, the cornea, the conjunctiva, and even the retina, accompanied with great intolerance of light. And when these parts become affected, the morbid appearances become so complicated, that the peculiar characters of the inflammation of the membrane of the aqueous humour are masked, and often prevented from being recognised. In cases of more general inflammation of the eyeball, the membrane of the aqueous humour and the cornea are much affected—to such a degree, that the cornea bulges, and forms partial or complete staphyloma from distension. In some cases, the sclerotic coat becomes of a bluish colour, or even staphylomatous. The disease, in some cases, is much less extensive than in the instances above detailed, and is observed to affect only the iris or cornea. Repeated relapses, or states of acute inflammation of short duration, are apt to occur. In some cases, too, there is more obscurity of sight than could be accounted for by the opacity of the cornea, leaving us to infer, that other parts of the retina itself may be implicated in the disease. The author considers this disease to be a modification of strumous ophthalmia, and that, therefore, it requires very particular attention to the constitutional as well as the local treatment.

The indications requiring attention are,—1st, to subdue states of excitement or acute inflammation by local and general antiphlogistic remedies; 2d, to stop the progress of the chronic stage of the inflammation; and, 3d, to prevent a relapse by tonics and nourishing diet. The *first* of these indications is generally answered by topical bleeding, by means of cupping or leeches, the application of warm fomentations, and blisters; purgatives, particularly when combined with antimonials, are very useful auxiliaries. The *second* indication is to be fulfilled by the moderate administration of mercury,—but, *in the subjects of this disease,* mercury requires to be very sparingly given, so as only slowly to affect the system. The *third* indication is to be answered by giving quinine and rhubarb in small doses, two or three times a day, with light nourishing diet, including animal food once a day, and, in some cases, a small allowance of wine. A combination of quinine and rhubarb seems to the author to be the best tonic in cases of strumous ophthalmia, and is the one which he finds most generally applicable. When this does not agree, magnesia and rhubarb, carbonate of soda with rhubarb or colombo, or preparations of iron, may be used with advantage.

In some cases it may be necessary to relieve excessive distension of the eye, caused by a morbid accumulation of aqueous humour, producing excessive pain of the eye, orbit, and head. This is to be accomplished by puncture of the cornea, as proposed by Dr. Wardrop, with a grooved needle, by which the fluid is evacuated. If, from the continuance of inflammation, the symptoms requiring it return, the puncture may be repeated, with the same beneficial effects in removing the pain and lessening the tension of the eye, which allows the part to recover from the disease. In all these cases it is of course necessary to prevent contraction and irregularity of the pupil by the application of belladonna. The author recommends the solution.—*Edin. Med. and Surg. Journ.*

SURGERY.

CASE OF CALCULUS VESICÆ IN THE FEMALE. DILATATION OF THE URETHRA; LITHOTRITY; FATAL PERITONITIS. BY HENRY CRAWFORD, ESQ.

S. S., aged 46, mother of thirteen children, was admitted into Canterbury Hospital, Oct. 24th, 1845. Her countenance was expressive of intense suffering; she complained of very painful and very difficult micturition, and distinctly described the sensation of a large heavy substance within her, which arrested the flow of urine, by falling against the orifice of the bladder, so that her nights were often passed in painful and fruitless efforts to relieve that organ. All the pelvic viscera suffered distressing sensations of weight and dragging, frequently aggravated into throes resembling those of parturition. The urine deposited an abundant mucous sediment, and was of a highly alkaline smell. Upon passing a sound into the bladder, a large calculus was immediately felt. She dated the commencement of her sufferings *ten years* ago, but during the last five they have become much more intense. She was ordered remedies calculated to diminish the irritability of the bladder, and, after a few days, the narrator gradually dilated the neck of the bladder by means of Weiss's dilator, until he could pass his finger and feel the stone, which was readily grasped by a pair of lithotomy forceps: but the distance to which the handles of the instrument were separated made it evident that something farther was necessary to render extraction possible. He felt inclined to adopt the operation advised by Mr. Liston under such circumstances, viz. to notch the fibres of the sphincter vesicæ on each side, afterwards employing the dilator with the view of obtaining room to extract the foreign body entire. However, after consultation with his colleagues, it was agreed to avoid the use of cutting instruments altogether, and to reduce the size of the stone by lithotrity. Accordingly, on Friday, October 31st, he proceeded to inject the bladder, which could be only imperfectly effected, and with considerable pain, on account of the irritable condition of that organ. Upon withdrawing the catheter, he introduced Weiss's screw lithotrite, with which the stone was easily seized and crushed, its diameter being, according to the index on the blade of the instrument, about two inches and a quarter; several large fragments were at the same time comminuted with but little pain to the patient. During several following days the fragments passed off freely; she expressed herself much relieved of the obstruction to micturition; the urine was longer retained, of a more healthy appearance, with less of mucous deposit or alkaline smell. Encouraged by these favourable appearances, and aware that much remained to be done before the bladder could be cleared, Mr. Crawford renewed his operations on the succeeding Monday, Tuesday, and Wednesday, crushing many fragments, and removing a portion of the detritus by the use of the screw scoop. The pain chiefly complained of on these occasions was that arising from the injection of the bladder. Mr. C. desired that all that passed should be preserved, but this was not done, as much of the detritus mingled with the urinary deposit in the form of impalpable powder, and she stated that large pieces escaped from the urethra during the act of defæcation. Some large fragments which were collected showed the composition of the calculus to be triple phosphate, with here and there a layer of the lithates.

On Friday, she complained that the passage of urine was again obstructed, and a large fragment was felt by the catheter, presenting at the internal orifice of the urethra. Mr. C. endeavoured to push this back into the cavity of the bladder, in order to seize it with the lithotrope; but all his efforts were ineffectual. He then thought it would be possible, after moderately dilating the urethra, to remove this fragment with the lithotomy forceps, as he had attempted to do with the entire calculus in the first instance; this he put in practice on Saturday morning, and persevered for several minutes in gentle but firm attempts at extraction: the proceeding caused considerable pain, and the operator was at length reluctantly compelled to let go his hold. On the Monday following she was very sick, which she attributed to the fright caused by an accident which had been brought into the ward on the previous day. Vomiting of all ingesta succeeded, with pain in the epigastrium, which quickly extended over the whole abdomen, and she sank, with all the symptoms of peritonitis, on Saturday, November 15th.

Autopsy.—The peritoneal surface of the stomach and intestines was coated with recently effused lymph; the walls of the bladder were much thickened; its cavity contracted; its mucous membrane of a dark venous red colour; and it contained *one* flattened irregular-shaped portion of stone, weighing three drachms, but *no other fragments or detritus.* The mucous membrane was not ulcerated, nor did it appear to be injured by the instruments employed.

The author remarks, that the operation of lithotrity to large stones has been strongly deprecated by some of our most able surgeons; but their observations have reference chiefly to the operations on the male; the facility afforded to the passage of fragments of considerable size through the short and dilatable female urethra, diminish the force of many of the above objections when applied to it. Had Mr. Liston's operation been adopted in this case, it may be doubted whether fatal consequences might not have followed the immense degree of dilatation required, not to mention the dreadful (though minor) evil of permanent incontinence of urine. The small amount of pain and temporary relief produced by crushing the stone, together with the remarkable manner in which the bladder contrived to rid itself of so large a portion of fragments and detritus in the above case, appear to indicate that nature is on our side in the employment of crushing as a means of relieving the sufferer from vesical calculus; though the author admits that the question remains open, whether the safer, and therefore the preferable operation to have recourse to in another similar case, would not be the old one of lithotomy through the vagina.—*Prov. Med. and Surg. Journal.*

Remarks.—We regard the above case as another illustration of the almost inevitable danger which attends the operation of lithotrity in cases where there is either confirmed organic disease, or severe irritation, of the bladder. The value of the case would have been much enhanced had reference been made to the state of the kidneys and other abdominal viscera, as the occurrence of fatal inflammations after operations, and especially in consequence of lithotomy and lithotrity, certainly appears to be very frequently determined by diseased condition of those organs.—Ed. Gaz.

CASE OF LITHOTOMY IN THE FEMALE.

BY MR. SYME.

Mrs. ——, aged 45, from Wick, was admitted upon the 10th of June, on account of stone in the bladder, from which she had suffered the usual symptoms for ten months. On the 12th, after dilating the urethra by the successive introduction of bougies. gradually increased in size, I passed my finger into the bladder, and divided the ring at its orifice outwards and downwards by means of a straight bistoury. This incision was of very small extent, hardly exceeding the breadth of the blade, which was rather narrow. The textures then readily yielded, so as to allow me, without the use of violence, to introduce the forceps, and extract a stone about the size of a chesnut: not the slightest inconvenience followed the operation. The patient regained the power of retaining urine in the course of eight days, and returned home quite well on the 28th.

Lithotomy in the female affords an instructive illustration of the principle on which this operation may be performed with safety on the male. The parts are nearly in the same state, so far as the obstacles to extraction are concerned, as those of the male after the incision of the perineum has been completed, and as if the prostate were also completely divided. However much the facility and rapidity of the operation may be promoted by cutting instead of tearing the textures thus far, it does not appear that the choice of these means materially affects the patient's chance of recovery, provided the opening from the skin to the prostate be made sufficiently free. But, in both sexes, there is still an obstacle remaining, which admits of ready removal by incision, and cannot be overcome by tearing without almost certain death. This is the sensitive ring which surrounds the neck of the bladder, at the base of the prostate in the male, and at the corresponding part in the female. Bilateral and extensive incisions are altogether useless and improper, since the space required is obtained not directly through the extent of parts cut, but by the yielding of the textures through tearing and separation of their fibres, after the unyielding ring has been divided.

In dilating the urethra, to accomplish any of the purposes which *require its capacity to be temporarily increased, I find no means so convenient as the introduction of* bougies. This may be done in rapid succession, so as to obtain the object in a few minutes, without causing any pain whatever. —*Monthly Journ. of Medical Sciences.*

PATHOLOGY.

PATHOLOGICAL PROPOSITIONS RELATING TO PHTHISIS. BY DR. EVANS.

1. Phthisis is a disease characterized by a deficient force of growth, together with symptoms, both local and general, of active pulmonary congestion. 2. The preponderance of white tissues in this disease is due to a diminished force of growth, whereby the tissues generally, but the red in particular, are rendered incapable of attracting from the blood their normal quantity of aliment, and by which their power of resisting decomposing influences of external agencies is diminished. 3. The diminution of the force of growth depends upon the abstraction of natural stimuli and aliment: for example, want of heat, light, oxygen in the blood, &c., and the food being insufficient and innutritious. 4. The active pulmonary congestion depends upon the application of stimuli too violent and too prolonged, and may display itself either in the form of bronchitis, hæmoptysis, or pneumonia. 5. The symptoms of active pulmonary congestion in this case are, hectic fever, hæmoptysis, catarrh, cough, altered voice, together with derangement of the digestive and uterine functions. 6. The pathological appearances of the active pulmonary congestion are those of bronchitis, pulmonary apoplexy, or of pneumonia in the stage of engorgement. 7. The same causes which produce the symptoms of phthisis, are likewise apt to produce the secretion of what is called tubercle, an albuminous substance intermediate between coagulable lymph and pus. 8. The parts of organs that have secreted tubercle are subsequently disposed to ulcerate and suppurate, and the tubercle at the same time to soften in part into a fluid similar to pus. 9. Abscesses formed by the softening of tubercles, and the ulceration and suppuration of surrounding parts, are subject to the ordinary law of abscess, viz. burrowing to and bursting from the surface presenting the least resistance, following the least organized track in their fistulous course, cicatrizing by the means of a lining membrane, &c. 10. Masses of tubercle and tuberculous cavities are generally surrounded with indurated lung substance, of a black, yellowish, or greyish colour. 11. In proportion to the amount of this induration will be the signs of impeded circulation, namely, dilatation of the right cavities of the heart, and enlargement of the extremities of the fingers. 12. The existence of tubercles is not signalized by symptoms, nor their

absence a cause of amelioration in disease. 13. The presence of tubercles never causes inflammation in the surrounding tissues. 14. The state of emaciation being a direct consequence of the diminished force of growth, and this latter being the predisposing cause of phthisis, we ought to expect emaciation, or something analogous to it, to precede in general the local signs of phthisis. 15. The lesions in phthisis most important to be kept in mind, are the deficient force of nutrition, and the local pulmonary irritation; and the symptoms of this disease, namely, the emaciation, hæmoptysis, hectic fever, cough, alteration of voice, loss of appetite, thirst, constipation, diarrhœa, amenorrhœa, &c., are all more or less the consequences of these lesions. 16. Hæmoptysis, when very profuse, may be the cause of the diminished growth and pulmonary irritation of phthisis. 17. Subacute gastritis may predispose to phthisis. 18. Excessive discharges, as diarrhœa, menorrhagia, &c., may produce diminished force of growth, and thus predispose to phthisis. 19. The suppression of menstruation in a person predisposed may produce active pulmonary congestion, and thus give rise to phthisis.—*Medico-Chirurgical Review.*

[Remarks.—Some of the above remarks must be received with caution; the eleventh, for example. It has long been known as one of the most interesting facts connected with phthisis, that the obstruction to the circulation in this disease is very rarely commensurate with the degree of pulmonary induration; it is often remarkable how freely the heart acts, and how little the patient suffers from dyspnœa, in cases where the amount of tubercular degeneration known to exist might be expected to offer the most serious obstacle to the pulmonary circulation. Dr. Latham has very justly ascribed this to the diminished volume of the blood resulting from the impaired nutrition, and the profuse discharges which attend the latter stages of this disease; hence the heart and pulmonary vessels are not overloaded with their contents, and the cavities of the former organ remain small, and capable of impelling the blood with rapidity and freedom. The converse of this is sometimes observed in phthisis. Cases occur in which, from various causes, the quantity of the circulating fluids does not become diminished; here the patients suffer from lividity of the surface and severe dyspnœa, and the right cavities of the heart are found dilated and weak. There is no sufficient reason to conclude, that the alteration in the shape of the ends of the fingers and the nails, in phthisical individuals, depends upon delay to the circulation; this state of parts is often developed before the existence of pulmonary disease is at all manifest, except upon careful examination; and, in many persons who have long suffered from the most severe cardiac and pulmonary obstructions, no such malformation of the fingers appears.—Ed. Gaz.]

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 24.

Births.		Deaths.		*Aver. of 5 yrs.*	
Males....	705	Males....	437	Males....	493
Females .	632	Females .	445	Females .	475
	1337		882		968

Deaths in different Districts.

West—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	136
North—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	158
Central—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ... .(Pop. 374,759)	165
East—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	209
South—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	214
Total	882

Causes of Death.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
All Causes	882	1000	968
Specified Causes	882	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	182		
2. Dropsy, Cancer, &c. of uncertain seat	92	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	125	151	157
4. Lungs, and other Organs of Respiration	261	313	294
5. Heart and Blood-vessels	35	29	27
6. Stomach, Liver, and other Organs of Digestion	64	70	73
7. Diseases of the Kidneys, &c...	13	8	7
Childbirth, Diseases of the Uterus, &c.	25	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c..........	10	6	6
10. Skin, Cellular Tissue, &c.	6	2	2
11. Old Age	47	66	67
12. Violence, Privation, Cold, and Intemperance	22	27	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	3	Convulsions	27
Measles	5		
Scarlatina	33	Bronchitis	41
Hooping-cough ..	22	Pneumonia	53
Diarrhœa........	30	Phthisis	127
Cholera..........	2	Dis. of Lungs, &c.	14
Typhus	61	Teething	6
Dropsy..........	14	Dis. Stomach, &c.	10
Sudden deaths ..	2	Dis. of Liver, &c.	8
Hydrocephalus ..	27	Childbirth	14
Apoplexy........	24	Dis. of Uterus, &c.	8
Paralysis........	16		

Remarks.—The total number of deaths was 118 below the autumnal and 86 below the annual average. The deaths from typhus fever have considerably increased, and the mortality is now double the averages. The mortality from diarrhœa still continues above the averages. In all the districts, the mortality was below the averages.

'EOROLOGICAL SUMMARY.

eight of Barometer ....29·35
„ Thermometer[a]............49·1
istering do.[b]......max. 74·5 min. 28·
the Thames water „ 0· „ 48·5

[a] From 12 observations daily. [b] Sun.

, in inches. 1·42: sum of the daily obser-
taken at 9 o'clock.

rological. — The mean temperature o'
nearly corresponded to the mean of the
48·9°). The extreme hebdomadal range
elf-registering thermometer was 46·5°.

ICES TO CORRESPONDENTS.

us" will obtain all the information he
es by making a written application to
cretaries of the respective Colleges. We
e that some change has been lately made
examinations.
-kwick, of Langham Place, writes to in-
us, that he will have much pleasure in
ng the articles which he has lately intro-
as a substitute for poultices, &c. to any
er of the profession who will call upon

et that we cannot comply with the re-
of a provincial friend. We have long
been obliged to make it a rule not to
h lists of prize distributions in the body
journal.
. Beck's paper has been received, and is
consideration.
orts of the Manchester Pathological and
London Medical Societies reached us
te for the present number. We have,
ore, been obliged to postpone the inser-
f them until next week.
lical Practitioner."—There is only one
of summons which a Coroner can legally
to compel the attendance of medical wit-
. It will be found in Schedule A of the
and 7 William IV. chap. 89. We advise
orrespondent to procure a copy of the
He is not obliged to attend an inquest
, the summons is drawn up strictly ac-
g to the schedule. If, however, he
attend upon a "common" (illegal?)
ons, the Coroner can evade the payment
fee. We should think that a Coroner
ted in so dishonourable a manner as to
re medical evidence, by a trick of this
was not fit for his office, and it would
a good ground of complaint against him.
er of Mr J. Adams on Scirrhous Tuber-
d that of "Medicus" on Smallpox and
ation shall appear in our next number.
enteen Years' Subscriber."—The subject
e taken into consideration.
n der the necessity of deferring the pub-
n of ...'s paper until next week,
to the engraver not having completed
od ...
—Dr. ...n.
...: — In *Mr. Hawkins' lecture* at p. 736,
... s," *read* "three-sevenths."

ublished, 8vo. 15s. cloth,

UNDERWOOD'S TREATISE
n the DISEASES of CHILDREN: with
ns to the Management of Infants. The
edition revised, with the addition of much
tter. By HENRY DAVIES, M.D. Fellow
Royal College of Physicians, and Senior
n to the British Lying-in Hospital.

n: John Churchill; Longman and Co.;
and ...: S. Highley; *and* T. *Hill.*
Longman and Smith.

LONSDALE ON FRACTURES.

In 8vo. with Sixty Woodcuts, price 16s.

A PRACTICAL TREATISE on FRACTURES; explaining the Causes, Symptoms, and various Modes of Treatment. By EDWARD F. LONSDALE, Fellow of the Royal College of Surgeons, Assistant-Surgeon to the Royal Orthopædic Hospital.

By the same Author, price 3s. with Lithographic Drawings and Woodcuts,

A DESCRIPTION of THREE INSTRUMENTS for Fractures of the Lower Jaw, Fractures of the Patella, and for tying Uterine Polypi.

London: John Churchill, Princes Street, Soho.

Shortly will be published, post 8vo.

TERRESTRIAL and METEORIC CHEMISTRY of the THREE ZONES, Polar, Temperate, and Equatorial; and the Physical Relations of Organized Beings. By THOMAS WILLIAMS, M.D. Lond., Member of the Royal College of Physicians.

London: John Churchill, Princes Street, Soho.

In 8vo. cloth, price 6s.

A PRACTICAL TREATISE on INFLAMMATION, ULCERATION, and INDURATION of the NECK of the UTERUS; with Remarks on Leucorrhœa and Prolapsus Uteri as symptoms of this form of Disease. By J. HENRY BENNET, M.D., Physician-Accoucheur to the Western Dispensary, formerly House-Physician to the Hospitals St.-Louis, La Pitié, and La Salpêtrière, Paris, &c.

"Dr. Henry Bennet's work has, we think, very ably supplied a deficiency in this part of medicine ...... We do not hesitate to say that Dr. Henry Bennet has treated these subjects more clearly and faithfully than any author we are acquainted with, and we have read his treatise with much real satisfaction."

MEDICO-CHIRURGICAL REVIEW.

London: John Churchill, Princes Street, Soho.

Just published, illustrated with Engravings on Wood, post 8vo. 10s. 6d. cloth,

CHEMISTRY of the FOUR SEASONS; Spring, Summer, Autumn, Winter. By THOMAS GRIFFITHS, Professor of Chemistry in the Medical College of St. Bartholomew's Hospital.

John Churchill, Princes Street, Soho.

Just published, Second Edition, post 8vo. 8s. 6d. cloth,

ON URINARY DEPOSITS; their Diagnosis, Pathology, and Therapeutical Indications. With Forty-six Illustrations on Wood. By GOLDING BIRD, M.D. F.R.S., Assistant Physician to Guy's Hospital.

London: John Churchill, Princes Street, Soho.

Just published, fcp. 8vo. 12s. 6d. cloth,

A MANUAL of CHEMISTRY; with numerous Illustrations on Wood. By G. FOWNES, Ph.D. F.R.S. Professor of Practical Chemistry in London University College.

"An admirable exposition of the present state of chemical science, simply and clearly written, and displaying a thorough practical knowledge of its details, as well as a profound acquaintance with its principles. The illustrations and the whole getting of the book merit our highest praise."

BRITISH AND FOR. MEDICAL REVIEW.

London: John Churchill, Princes Street, Soho.

THE

DUBLIN QUARTERLY JOURNAL

OF

Medical Science.

No. IV. FOR NOVEMBER, 1846, CONTAINS:—

Original Communications.

1. On Chlorosis and Hæmorrhage. By Sir Henry Marsh, Bart., reported by Dr. Hill.
2. On Excision of the Cervix Uteri for Carcinomatous Diseases. By J. Y. Simpson, M.D. Edinburgh. With Illustrations.
3. On the Cure of Popliteal Aneurism by Compression. By J. M. O'Ferrall, M.D. With Illustrations.
4. On the Efficacy of Electricity, Galvanism, Electro-Magnetism, and Magnetic Electricity, in the Cure of Disease. By M. Donovan, Esq.

Reviews and Bibliographic Notices.

Brodie's, Liston's, Chelius's, Ferguson's, and Miller's Surgery.—Parkes on the Dysentery and Hepatitis of India.—Coley on the Diseases of Children.—Patterson's Zoology.—Makellar on Black Phthisis.—Burrows on Diseases of the Cerebral Circulation.—Leeson's Exposition of Liebig's Physiology.—Griffith on the Blood and Human Secretions.—Swedenborg's Economy of the Animal Kingdom.—Rees on the Blood and Urine in Health and Disease.

Retrospects, Reports, and Scientific Intelligence.

Proceedings of the Pathological Society of Dublin.—*Medical Miscellany*—Consisting of Cases by Drs. Hamilton, Ellsworth, Humfrey, Marshall, Aston Key, Purdon, O'Flaherty, Purefoy, Cusack, and Wilde.—*Obituary*—Biographical Memoir of Dr. Bartholomew Mosse, founder of the Dublin Lying-in Hospital (*with a Portrait*). Index to Vol. II.

OPINIONS OF THE PRESS.

"The Dublin Medical Journal, which has long ranked as one of the most able representatives of Medical Science in Ireland, has recently been transformed into a Quarterly Periodical, under the editorship, we understand, of Mr. Wilde. . . . . We have no doubt that the Dnblin Quarterly will prosper, and increase the high character which it bears in periodical medical literature. The first number, which we have now before us, promises well for the future. . . . . We wish our contemporary every possible success. We have the highest opinion of the Irish Medical School—a school remarkable for its sound clinical character, and its freedom from speculative fancies, and wish well to its representatives in the Medical Press."—Lancet, February 14th, 1846.

"We have been led to the exult in the memorials of literary and scientific greatness bequeathed to us by the illustrious Irishmen of former days; a periodical, such as that before us, tells that the spirit which animated them still exists; and we should be unjust to the eminent men of the present age did we not acknowledge, that at no period in the annals of this, or any other nation, has the steady and increasing light of medical science shone with brighter lustre. It is for the young to appreciate the responsibility, as well as privilege, of sustaining and spreading an illumination so honourable to their country."—Dublin Hospital Gazette, April 1st, 1846.

"Distinguished as it has heretofore been for ability, and the avoidance of anything offensive to good taste, the character of those by whom it is hereafter to be conducted, no less than the evidence furnished in the number before us, afford a sure guarantee that it will maintain its position among the ablest and most valuable medical periodicals of the day."—Philadelphia Medical Examiner, June, 1846.

"This Journal, which has flourished from the year 1832 until the present time, during which period twenty-eight volumes have been published, has now assumed a new and enlarged form. Its pages are devoted to medical and surgical science in all its branches, including Chemistry, Materia Medica, and Botany; 'unconnected with medical politics, and influenced by party feeling, jealousy, or personal hostlity.' . . . . . . It is satisfactory to observe the increasing disposition which prevails, both in England and in Ireland, to encourage and support undertakings of this description."—Pharmaceutical Journal, March 1st, 1846.

Hodges and Smith, 104, Grafton Street, Dublin. Longman and Co.; Simpkin, Marshall, & Co.; and W. S. Orr, London. Sutherland and Knox, Edinburgh. Glasgow: D. Chambers.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by Eliezer Chater Wilson, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by William Longman, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Nov. 6, 1846.

N° 989.—Vol. XXXVIII.
[New Series, No. 81.]

Price {Unstamped, 8d. / Stamped.... 9d.

LONDON MEDICAL GAZETTE

OR

Journal of Practical Medicine.

Published every Friday Morning.

November 13, 1846.

Also in Monthly Parts.

LECTURES.

Page
A Course of Lectures on Medical Jurisprudence, delivered at Guy's Hospital, by Alfred S. Taylor, Esq. F.R.S.: Lecture XI. 823
Minority 823
Identity in the Living 824

ORIGINAL COMMUNICATIONS.

A Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery, as bearing upon the Treatment of Cardiac and Pulmonary Diseases. By Norman Chevers, M.D. With Engravings. Part VI. 828
Malformations by Defect of the Pulmonary Artery 828
Malformation by Excess of the Pulmonary Artery 832
Removal of a Scirrhous Tubercle from the soft Palate by Ligature. By J. Adams, Esq. F.R.C.S. Assistant-Surgeon to the London Hospital 836
On a newly-discovered Ganglion, of very simple Form and Structure. By T. W. Jones, F.R.S. &c. &c. With Engraving 837
Table of Deaths occurring in Private Practice, as registered from August 29, 1845, to August 29, 1846. By George May, Esq. of Reading 837

LEADING ARTICLES.

Seventh Annual Report of the Registrar-General—Refusal of Medical Practitioners to sign Certificates 840

REVIEWS.

The Complete Surgical Anatomy of the Human Body: in Eighty-seven Drawings, imperial folio. By Richard Quain 843
Chemistry and Physics, in relation to Physiology and Pathology. By Baron Justus Liebig, M.D. F.R.S. &c. 843
Elements of Chemistry; including the applications of the Science in the Arts. By Thomas Graham, F.R.S.L. and E. &c. 2d edition. Part 1 845

PROCEEDINGS OF SOCIETIES.

Manchester Pathological Society.—Aneurism of Arch of Aorta in process of Cure—Rupture elsewhere 846
Four Pulmonary Semilunar Valves. With Engraving 847
Page
Paralysis of Gullet—Inflammatory Induration of Medulla Oblongata. With Engraving 848
South London Medical Society.—Mr. Cock on a Case of Strangulated Hernia complicated with Pregnancy 849
Medical Society of London.—Opium in Inflammation 851
Influence of Lactation on the Health of Infants 852
Westminster Medical Society.—Alkalescent Urine, and Phosphatic Urinary Calculi . 852
Pathological Society of London.—Dr. Oldham on a Case of Extra-Uterine Fœtation .. 853
Cancrum Oris 854
Large Fibrous Polypus of the Small Intestine 854
Clot in the Pons Varolii 855
Diseased Heart 855
Communicating Ulcer between the Stomach and Colon 856
Peculiar Form of Gradular Kidney 857
Rupture of the left Ventricle of the Heart 857
Omental Hernia 857

CORRESPONDENCE.

On the Influence of Vaccination in diminishing the Mortality from Small-pox .. 857
A Description of a New Electro-magnetic Machine, adapted so as to give a succession of Shocks in one direction. By H. Letheby, M.B. Lecturer on Chemistry at the London Hospital. With Engraving 858

MEDICAL STATISTICS.

State of the Public Health in the Summer Quarter, ending September 30th, 1846.. 859

MEDICAL INTELLIGENCE.

The Asiatic Cholera in Persia 842
Liberation of Dr. Renzi 862
Cheltenham General Hospital 862
Cumberland Infirmary 862
The Botanic Gardens at Chelsea 862
Promotions under the Brevet 862
Bath Pathological Society 862
Dinner to Professor Orfila at Madrid 862
Gun-Cotton—Xyloïdine 863
Health of Towns Association 864

SELECTIONS FROM JOURNALS, ETC.

Abortion consequent on Variola 828
Poisoning by Mushrooms 835

WEEKLY TABLES, ETC.

[For Advertisements, see next page.

28, Upper Gower Street, November 1846.

PROPOSAL TO PUBLISH,

To Subscribers only, at a remarkably low price,

MR. QUAIN'S WORK ON "THE ARTERIES,"

BEING THE COMPLETE

SURGICAL ANATOMY OF THE HUMAN BODY:

In Eighty-seven Drawings, imperial folio, (27 by 21½ inches), coloured where neceesary; the Figures the size of Life, drawn from Nature, and on Stone, by

JOSEPH MACLISE, M.R.C.S.

ACCOMPANIED WITH AN OCTAVO VOLUME OF LETTERPRESS.

⁂ *The Plates will be contained in a Portfolio, superseding the necessity of Binding.*

MESSRS. TAYLOR and WALTON, the Proprietors and Publishers of this work, respectfully inform the Medical Profession, that as the large size of the stones, on which the drawings are made, renders it difficult to retain them uninjured for use from time to time, whenever they may be wanted, they propose to print off at once as many copies as may be required, on the following terms, and then to efface the drawings from the stones, that the plates may not be hereafter produced in a less perfect manner:—

The work, complete in Seventeen Parts, unbound, accompanied with an octavo volume of Practical Commentaries, is published at £10. 12s.

It is proposed to receive the names of Subscribers for a further issue, till the number amounts to Five Hundred; in which case the work will be charged to each Subscriber no more than £6. 6s. per copy, being less than Eighteen-pence each plate, without reckoning anything for the octavo volume of Commentaries, consisting of 560 pages, which alone, from the number of Tables contained in it, could not be published for less than One Guinea.

The Plates, considered only as works of art, are, for their large size and intrinsic merit, worth at least 10s. each; and the price at which they are now offered to Subscribers is below that of the cheapest of all modern publications. The reason for so low a price being charged, is the desire to gratify a wish, which many persons have expressed, that a work of such value to the Profession should not be treated as a mere mercantile speculation; but that the utmost facilities should be afforded for giving it the most extensive circulation of which it is capable. In furtherance of this object, the proprietors have received every possible assistance and encouragement from the liberality of the author.

When it is remembered that all the parts of the Anatomy of the Human Body, of importance to the Practitioner, are associated with the Blood-vessels, and that this work may be considered a complete TREATISE OF SURGICAL ANATOMY, the proprietors trust that they may, without impropriety, urge on the profession the advantage of availing themselves of the present opportunity of obtaining, at so comparatively small a cost, a publication of which it is not too much to say, that, on the subject on which it treats, no work of the same extent and accuracy, and so successful in the artistic effects of the drawings, has ever appeared in this or in any other country.

⁂ Subscribers are requested to favour the Publishers with their names as soon as possible, either direct or through their respective Booksellers.

N.B.—As some misconception has from time to time arisen, the Publishers think it necessary to state, that the present work of Mr. Richard Quain is quite independent of the Series of Anatomical Plates published by them, of which Dr. Jones Quain is one of the editors. The plan and object of the two works are entirely different.

EXTRACT FROM THE REVIEWS.

(*From the British and Foreign Medical Review.*)

"The 'Anatomy and Operative Surgery of the Arteries' of Professor Quain, must not, then, be thought to be a work altogether similar to that of the Heidelberg Professor. True it is, that in both the arteries are described. The work of Quain differs essentially, in being almost altogether Practical, and bestowing most attention on those dispositions of the larger trunks and branches which have occasioned difficulties to the surgeon. Since the appearance of the English work, the German publication must cease to be considered the measure of our knowledge; for the latter is less extensive in observation[*], less accurate in anatomy, and less practical in its nature, than Quain's 'Anatomy of the Arteries.' But we do not confine our approbation to the fact of the work containing what Tiedemann does not supply; it has peculiar merits of its own, which entitle all engaged in this publication to great praise. It is one of those undertakings which necessarily occupy many years in accomplishing, and are not often attempted, from the time, expense, and labour, required in their execution.

"It is indeed a national honour to have originated and executed a work that will be handed down to posterity, with those of Haller, Scarpa, Hunter, Sœmmering, &c., as one alike laborious in research, correct in its representations of nature, and worthy to be imitated. In conclusion, it only remains for us to express our anxiety that the facts collected by Professor Quain should be generally known by the wide circulation of his work. Our conviction is, that no one who peruses it will fail to augment greatly his knowledge of the vascular system. To every operating surgeon, and every anatomist, its possession is essential; and into all public libraries it must command admission, as the unquestioned standard authority on the anatomy and operative surgery of the arteries of the human body."

---

[*] *The work of Professor* Tiedemann consists of THIRTY-SEVEN Plates: the present work comprises *EIGHTY-SEVEN*, besides a volume containing the results of a very extensive Series of Observations with *practical Commentaries.*—(T. and W.)

Lectures.

A COURSE OF LECTURES ON MEDICAL JURISPRUDENCE,

By Alfred S. Taylor, F.R.S.

Delivered at Guy's Hospital.

Lecture XI.

MINORITY *continued—Age for making wills—for consenting to marriage—age of females in relation to rape and abduction—the date of birth—importance of this question—legal attainment of majority—effect of age on criminal responsibility—exception with respect to rape.* IDENTITY *in the living—medical evidence in relation to this subject—identity from the form of wounds—personal peculiarities—identity from the form of an ecchymosis—established by the mutilation of a finger—cases of mistaken identity by resemblance of features — comparative tests—utility of medical evidence on these occasions—Stuart's case—execution of a person under mistaken identity—identity of persons from the flash of gunpowder—general remarks.*

IN the last lecture we discussed certain civil disabilities connected with *age*; and on the present occasion I have to call your attention to some other medico-legal relations of this subject.

MINORITY.—By the 1 Victoria, c. 26, no will made by any person under the age of twenty-one years, shall be valid. In connection with this subject it is proper to state, that the day of a person's birth is included in the computation of his age; and as there is in law no fraction of a day, a will may be made at any time on the day before that which is usually considered the twenty-first anniversary of birth, and yet be held valid.

In regard to marriage, a male at fourteen is considered by law to have the power of giving or withholding his consent. Under this age his consent is not valid, and the matrimonial contract is not binding on him. A female at seven years may be betrothed or given in marriage; at nine (20 Henry III.) is entitled to dower; at twelve is at years of maturity, and may consent or not to the marriage contract. But even under these circumstances, the law requires the consent of the nearest relative or guardian, unless the parties have been previously married to others. A marriage contracted by a minor has, however, been held valid, although th father was at the time living, and did not give his consent. At full age, either in male or female,—that is to say, at twenty-one years,—the parties may contract marriage of their own free will, without the consent of either parent or guardian.

The age of a female is of material importance in law in questions of alleged *rape*. Thus the consent of a female, when under ten years, to the act, is invalid, and the offence is the same in law as if consent had not been given; *i. e.* felony. If carnal intercourse be had with the consent of a female between the ages of ten and twelve years, the offender is guilty of a misdemeanour only. Above the age of twelve years, the consent of the female does away with the imputation of any legal offence. The abduction of any unmarried girl under the age of sixteen years, without the consent of her parents or lawful guardians, is a misdemeanour by the 9th Geo. IV. c. 31.

In reference to age, the proof of the actual *date of birth* has become sometimes material in civil actions. This has happened in cases where a period of a few days, hours, or even minutes, was required, in order to prove the attainment of a majority, and therefore legal responsibility for the performance of civil contracts, into which the parties had entered either knowingly or ignorantly when minors. Some such cases have been speedily decided by the evidence of the medical practitioner present at the delivery; others, when he was dead, by the production of his books; and it may be observed, that the strictness and punctuality of some medical practitioners in making written memoranda of the cases attended by them in their obstetric practice, have in more than one instance led to a satisfactory settlement of such suits, and the avoidance of further litigation.

It is important to know that the question of majority or minority may turn upon a few hours, or even minutes. The fact that majority is legally attained on the day before the anniversary of birth, is of some importance on these occasions. A curious case of this kind was decided in the House of Lords in 1775. An estate was bequeathed to a Thomas Sansom, so soon as he should attain the age of twenty-one years. It appeared in evidence, that he was born between the hours of five and six on the morning of the 16th August, 1725, and died about eleven in the forenoon, on the 15th August, 1746, from the effects of a fall. In the Court of Chancery, it had been decided that he had attained his majority.[*] It was urged before the House of Lords, on appeal, that eighteen hours were wanting to complete the anniversary of his birth; but the House confirmed the decision of the Chancellor, because the deceased was living on the day that completed the period. This decision appears to rest on the fact, that a part being taken for a whole day, the deceased was legally considered to have been born on the first minute of the 16th August, 1725, and to have lived until the last minute of the 15th August, 1746,—a wise and equitable rule, because it operates with certainty, and raises a question which easily admits of proof.

A person is therefore considered to be completely of age after the first instant of the day before the twenty-first anniversary of his birth-day, although forty-seven hours, fifty-nine minutes, and as many seconds, short of the complete number of days counting by hours; and this mode of calculating age and time is applicable to all the other ages before or after twenty-one. Another case was tried in the Court of Exchequer, Westminster, in June 1837; I allude to that of Best *v.* Hall. A gentleman accepted a bill bearing date the 8th June, 1831, and he died a few months afterwards. His executors disputed payment on the ground that he was not of age, but in his minority at the time that he parted with the bill. It appeared that he was born on the 7th June, 1810, a fact proved from his books by the medical practitioner who attended the mother. Although at the date of the bill he had attained his majority, a witness proved that he had received the bill a week before, and filled up the date. The jury therefore returned a verdict for the defendants, not considering the acceptor liable at the time of the transaction. This case shews that important services may be rendered by medical men keeping books in which they make regular entries of cases.

A question relative to age may arise in cases where young persons are charged with serious crimes, such as murder or arson. The law on this subject has been very clearly expressed in a judgment lately given by Mr. Justice Erle. When a child is under the age of seven years, the law presumes him to be incapable of committing a crime; after the age of fourteen, he is presumed to be responsible for his actions as entirely as if he were forty; but between the ages of seven and fourteen, no presumption of law arises at all; and that which is termed a malicious intent—a guilty knowledge that he was doing wrong—must be proved by the evidence, and cannot be presumed by the mere commission of the act. In this case the boy was *ten* years of age, and was indicted for setting fire to a hayrick. There was no evidence of any malicious intention, and the jury acquitted the prisoner, considering that at the *time he* fired the rick he had no guilty know*ledge that he* was committing a crime. If, *however*, any facts should shew that there was a guilty knowledge, then children even under ten years may be found guilty, on the principle of *malitia supplet ætatem*; but the younger the child, the stronger the evidence which would be required for conviction. In these cases age is proved not by a medical examination of the teeth, but by the production of legal documents, or the oral testimony of relatives.

An infant under fourteen is presumed by law to be unable to commit a rape, and therefore it is said he cannot be found guilty of it; for though in other felonies sometimes *malitia supplet ætatem*, yet as to this particular act the law presumes him impotent. Recorded cases, however, shew that boys of this age are not always impotent. Whether a boy under fourteen can or cannot be guilty of a rape, ought to depend partly on the proof of guilty knowledge, and partly on bodily capacity to commit the crime. The last may give rise to a medical question respecting the age at which virile powers are acquired, a subject which has been already examined. Instances of precocious puberty are, it is well known, very frequent. According to a late alteration in the law, proof of penetration only is required to complete the crime. As proof of emission is, therefore, no longer required, it may become a technical question whether, admitting the existence of guilty knowledge, the crime might not be completed in law long before the signs of puberty were fully developed. This question is very likely to arise, where boys are charged with the crime of rape upon infant females. The proof of the fact must rest with the medical evidence. It is singular that the present English law of rape may, in strictness, be made to include eunuchs and infants, as well as male adults.

IDENTITY IN THE LIVING.

This can scarcely be regarded as a subject appertaining to medical jurisprudence. In a case of disputed identity, whether in civil or criminal cases, the proof must rest upon the general evidence. Occasionally a medical question may arise, as where, for example, a bone is alleged to have been broken, or a wound, burn, or scald, of a nature to produce a scar, has been inflicted; and the examination of the person may enable a medical witness to say whether such injuries have or have not occurred at an antecedent period. The presence of moles, nævi materni, personal deformities, marks of vaccination and small-pox, may be easily determined by examination. A person may have dyed his hair for the sake of destroying his identity; and if this be alleged, a chemical examination of a portion of the hair for lead, bismuth, or silver, may be required. Investigations of this kind commonly create no difficulty. It has happened in several cases of murder, that some of the hair of the murderer has been found firmly grasped in the hands of the dead person. When this occurs, the hair should be carefully preserved, for it may by its colour or other properties serve as an important means of identification. The examination of the hands of a person may sometimes throw light upon his occupation; as where, for instance, the skin is liable to become hardened in particular parts of the palm by the use of tools or instruments employed in certain trades.

A close attention to physical circumstances will often enable a medical witness to aid the legal authorities in the detection of the perpetrator of a crime. In the case of Richard Patch, who was tried and convicted for shooting his friend Isaac Blight, in 1806, Sir Astley Cooper was enabled to say, from an examination of the position of the deceased and the premises, that the assassin, whoever he was, must have been *left-handed*. At a conference held before the trial, the prisoner was pressed by his counsel to say whether he was *left-handed*; but he protested he was not. When called on to hold up his hand and plead to the indictment, he unconsciously held up his *left* hand. The form of a wound or other personal injury may become the means of identifying the assailant. A few years since the body of a respectable farmer was found lying on a high road, in one of the midland counties. The throat was severely cut, and he had evidently died from the considerable hæmorrhage which had taken place. A bloody knife was discovered at some distance from the body, and this, together with the circumstance of the pockets of the deceased having been rifled, led to a suspicion of murder. The suspicion was confirmed when the wound in the throat was examined by a surgeon. It was cut, not as is usual in suicides, by carrying the cutting instrument from before backwards, but as the throats of sheep are cut when slaughtered by a butcher. The knife had been passed in deeply under and below the ear, and had been brought out by a semicircular sweep in front, all the great vessels of the neck, with the œsophagus and trachea, having been divided from behind forwards. The nature of this wound rendered it at once improbable that it could have been self-inflicted; and it further served to detect the murderer, who was soon afterwards discovered. The prisoner, who was proved to have been a butcher, was subsequently tried and executed for the crime.

Starkie mentions, in his Law of Evidence, a singular case, which shews that the form of an ecchymosis may occasionally furnish very strong presumptive evidence against an accused party. In an attempt at murder during the night, the prosecutor in his own defence struck the assassin violently in the face with the key of the house-door, this being the only weapon which happened to be lying near him. The ecchymosis which followed this contusion corresponded, in the impression produced on the face, to the wards of the key; and it was chiefly through this very singular and unexpected source of evidence that the assailant was afterwards identified and brought to trial. Mr. Best has related a curious case, in which identity was established from the absence of certain teeth. A thief had broken into certain premises, and had eaten a quantity of fruit, leaving the rinds and fragments lying about. On examining them, it appeared that the person who had eaten them had lost two front teeth, which caused suspicion to fall on a man in the neighbourhood who had lost a corresponding number; and on being taxed with the theft, this man confessed his guilt.

Presumptions founded on peculiarities of dress or marks left by shoes, and circumstances of the like nature, are generally sought for by the officers of justice. A medical practitioner should, however, look closely to all circumstances connected with the body of a person suspected to have been murdered; as the most trivial may unexpectedly be found of great importance in a question of identity. A wound may be discovered on the person of an assailant, which he may pretend to account for by some accident, in order to evade suspicion. His statement may, however, be wholly irreconcileable with the appearances of the injury.—The kind of weapon used and the period at which it was inflicted, may sometimes be inferred from a simple examination, and prove that the prisoner's story is false. A case of this kind was tried in the West of England a few years back, in which an assailant was identified by the peculiarity of a wound on the knee. He had broken into a house at night with some others, and discharged his gun at the prosecutrix, while he was in the act of kneeling or stooping. The gun burst, and the recoil of the breech produced a mixed lacerated and contused wound on the knee of the assailant. When the prisoner was called upon to account for this wound, he referred it to an accidental blow from a mandril some time before. The appearance of the injury was, however, inconsistent both with the time of its alleged accidental infliction, and with the instrument said to have produced it; while, on the other hand, it was proved to correspond to such an injury as the broken breech of the gun would have produced. This led to the clear identity of the prisoner, and his subsequent conviction.

This case may be taken as the type of many others of a similar description. It proves that a medical witness should have his attention directed to every circumstance connected with an injury which is alleged to have been criminally inflicted.

Mr. Smith, a gentleman who formerly attended these lectures, communicated to me a very singular case, in which identity was established by the production in evidence of a portion of a finger belonging to the assailant. In 1834, two men were charged with having assaulted, with intent to rob, the prosecutor, a surgeon. It appears that the prosecutor, while walking late at night along a lonely road in the country, overtook three men who were strangers to him. One knocked him down by a severe blow on the face, and held him, while another put his hand upon his mouth to prevent his giving an alarm. The prisoner contrived to get his finger into the prosecutor's mouth, and during the struggle the latter bit off the end completely between the nail and the first joint (the first phalanx). The men then ran away. The piece of finger was given to a constable, and in the course of about eight hours, he found one of the prisoners with his hand bandaged. On examining the hand, it was ascertained that the tip of one finger was missing. The prisoner accounted for this by saying that he accidentally cut it off. This statement was found to be false, and he made several other statements. On comparing the piece of finger with the injured finger of the prisoner's hand, they were found closely to correspond. The portion of finger was preserved in alcohol for the trial, and upon this clear evidence of identity, he, with his companion, was convicted.

In some instances there is by coincidence so strong a resemblance between individuals, that innocent persons have been mistaken for the guilty, and have narrowly escaped conviction. In a case of recent occurrence, a female swore most positively to an officer in the army being her husband who was a perfect stranger to her. She assigned a particular period, only nine months before the time of making the charge, at which they had been married; but fortunately for the accused he was able to produce the clearest evidence of an alibi. Many curious cases of this kind are recorded in the Causes Celèbres, most of them of doubtful authenticity. Proof of identity must here depend on circumstances wholly independent of medical testimony. It is not a little remarkable, in the case just related, that the clegyman who performed the ceremony, and several respectable witnesses, were ready to swear that the accused was really the husband of the female,—*i. e.* they were ready to swear to what must have been, under the facts *proved* on the best evidence, an utter *impossibility*. Had this gentleman not been able to account for his proceedings, fifty miles away from the place where the ceremony was alleged to have been performed, the decision would probably have gone against him, from the testimony of the clergyman and others. This at any rate shows how careful persons ought to be in swearing to the identity of others from the features alone. Gesture, gait, voice, handwriting, and other circumstances, ought to correspond, or physical resemblance amounts to nothing. If there be a resemblance in features, there may be a difference in the voice,—if a resemblance in the voice, a difference in the manner of walking,—if, by a most rare coincidence, there should be an apparent correspondence in all of these characters, which, notwithstanding the multiplicity of beings, are really never found exactly alike in any two persons, then the hand-writing may aid in establishing or disproving identity. In the case mentioned, this fact was not noticed: no comparison was made between the hand-writing at the time of the marriage in the signature required, and the ordinary writing of the accused, or it would probably have been brought to a more speedy termination.

I am persuaded that these instances of mistaken identity depend not so much on the real resemblance of individuals to each other, in characters infinitely varied, as in a want of proper attention on the part of the witnesses. The observations made are loose:—and if the features of one person only recal on some points those of another, this is sufficient to induce many to swear to the identity of the individual. Lord Mansfield, in giving his decision in the Douglas Peerage case, in 1767, truly observed that the distinction between individuals in the human species is much more discernible than between other animals. A man may survey ten thousand people without seeing two faces exactly alike. If there should be a likeness of feature, there will be a difference in the voice, gesture, or other characters. It has been said that a person may be recognised by his features in the light,—by the tone of his voice in darkness, and by his hand-writing when distant or absent. This is true; but the generality of persons only make a careless observation of such matters, and hence innocent persons often become the subjects of false accusations.

I have said that medical evidence can be of little avail in these cases; but circumstances occasionally transpire from which a medical opinion may be formed, and an improper conviction prevented.

The late Mr. Carpue was thus enabled to rescue an individual who was tried at the Old Bailey in 1834, on the charge of being a convict and having unlawfully returned from transportation. The chief clerk of Bow-Street produced a certificate dated in 1817 of the conviction of a person, alleged to be the prisoner, under the name of Stuart. The governor of the gaol in which Stuart was confined believed the prisoner to be the person who was then in his custody. The guard of the hulks to which Stuart was consigned from the gaol, swore most positively that the prisoner was the man. On the cross-examination of this witness, he admitted that the prisoner Stuart, who was in his custody in 1817, had a wen on his left hand; and so well marked was this, that it formed a part of his description in the books of the convict hulk. The prisoner said his name was Stipler: he denied that he was the person named Stuart, but from the lapse of years he was unable to bring forward any evidence. The Recorder was proceeding to charge the jury, when the counsel requested to be permitted to put a question to a celebrated anatomist, MrCarpue, who happened accidentally to be present in court. He deposed that it was impossible to remove such a wen as had been described without leaving a mark or cicatrix. Both hands of the prisoner were examined, but no wen, nor any mark of a wen having been removed, was found. Upon this the jury acquitted the prisoner. It is highly probable, however, that but for the accidental presence of Mr. Carpue, the prisoner would have been convicted and transported for life, from the unfortunate resemblance which he was supposed to bear to the real convict, Stuart.

Mistaken identity has, however, on more than one occasion led to much more serious results than in this instance. There can be no doubt that persons have been hanged by mistake for crimes of which they were perfectly innocent. The following case occurred many years since, but the details are not the less instructive. A woman was robbed and maltreated on Kennington Common; she was taken to St. Thomas's Hospital, where she lingered for a short time, but while dying from the injuries which she had sustained, a man suspected to be the assailant was taken before her to be identified. She swore to his person, as one of the men who had ill-used her; and in a very short time afterwards, she died. The man was tried upon her dying declaration, made in the presence of a magistrate, found guilty in spite of his protestations of innocence, and was subsequently executed. A year after the execution, the innocence of this man was satisfactorily established by the discovery of the real murderers. It happened, unfortunately, that there was some circumstantial evidence which appeared to connect the prisoner with the crime; and he being a man of bad character, was unable to give any satisfactory account of himself, on the night on which the woman had been attacked.

I mention this case, because it is advisable that we should interfere to prevent parties accused being taken to be identified before persons actually dying. At this time there may be a half delirious state of mind, not easily recognized by non-professional persons; and confessions or statements then made, should, when they implicate other persons and are not strongly corroborated by circumstances, be regarded with great suspicion. I have heard of a case occurring within the last few years, where a statement affecting seriously another person was incautiously received by a medical man; and but for the clear establishment of an alibi, might have led to the trial of an innocent individual upon a false charge. When death takes place from hæmorrhage, or from a severe wound of the head, not entirely depriving the person of consciousness, the declarations of the individual should always be received with the greatest caution. One test of the correctness of a statement is, that the dying person gives at different times, and to different persons, the same account, but perhaps in different language; and that the details are consistent with each other.

Among the singular questions connected with this subject, is the following: Whether a person who fires a gun or pistol at another during a dark night, can be identified by means of the light produced in the discharge? This question was first referred to the class of physical sciences in France, in 1809, and they answered it in the negative. A case tending to show that their decision was erroneous, was subsequently reported by Fodéré. A woman positively swore that she saw the face of a person, who fired at another during the night, surrounded by a kind of glory, and that she was thereby enabled to identify the prisoner. This statement was confirmed by the deposition of the wounded party. Desgranges, of Lyons, performed many experiments on this subject: and he concluded that on a very dark night, and away from every source of light, a person who had fired the gun might be identified within a moderate distance. If the flash were very strong, the smoke very dense, and the distance great, the person firing the piece could not be identified. The question was raised in this country, in the case of the *Queen* v. *White*, at the Croydon Autumn Assizes, 1839. A gentleman was shot at while driving home in his gig during a dark night. He was wounded in the elbow. When he observed the flash of the gun, he saw that it was levelled towards him, and the light of the flash enabled him to recognise at once the features of the accused:—in cross-examination he said he was quite sure he could see the man, and that he was not mistaken as to his identity. The accused was skilfully defended, and he was acquitted. Evidence of this kind has, however, been received in an English court of law. A case is quoted by Paris and Fonblanque, in which some police-officers were shot at by highwaymen during a dark night. One of the officers stated that he could distinctly see, from the flash of the pistol, that the robber rode a dark brown horse of a very remarkable shape in the head and shoulders; and that he had since identified the horse at a stable in London. He also perceived by the same flash of light, that the person had on a rough brown great coat. This evidence was considered to be satisfactory.

From the information which I have been able to collect on this point, it appears to me there can be no doubt that an assailant may thus be occasionally identified. It is widely different, however, in respect to the following case referred to by Müller in his Physiology; namely, where a man declared that he recognized a robber through the light produced by a blow on his eye in the dark! As Müller observes, this is a clear impossibility; because the flashes thus perceived are unattended with the emission of light, and therefore can never be visible to any other person than the subject of them, nor is it possible that they can ever make any other objects visible. Dr. Krügelstein has lately opposed the inference deduced by Müller, and has supported his views by cases, which, however, do not appear to me to be satisfactory.

Such I believe are the principal facts in a medico-legal view connected with the subject of Identity. A medical man may be called upon in some rare cases to identify a child as being or not being the child of a particular female: but this difficult question will be more appropriately considered under he subjects of INFANTICIDE, and SUPPOSITITIOUS CHILDREN.

ABORTION CONSEQUENT ON VARIOLA.

A CASE is mentioned as occurring under Dr. Marrotte, in which a woman, aged 26, in the fourth month of pregnancy, had a severe attack of confluent small-pox. Five days after complete desiccation of the variolous pustules, and without any external cause, the woman suffered abortion. The fœtus was well formed, between the fourth and fifth month, and presented no trace of variolous eruption. What renders this case curious is the late period after the disease at which abortion occurred; for when premature delivery is caused by any febrile disease, this event usually takes place at the period of greatest reaction. In variola it commonly occurs at the time of suppuration of the pustules.—*Gazette des Hôpitaux*, Sept. 5, 1846.

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE MORBID CONDITIONS OF THE PULMONARY ARTERY, AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By NORMAN CHEVERS, M.D.

[Continued from p. 750.]

MALFORMATIONS BY DEFECT OF THE PULMONARY ARTERY *(continued.)*

Absence of the sygmoid valves.

IN many of the cases of narrowing of the pulmonary ostium which have been already cited, the valvular apparatus at the origin of the vessel presented scarcely the faintest resemblance to the natural arrangement of the sygmoid curtains, the development of the valves being especially incomplete in those cases where the imperfect state of the ventricular septum, and other extremely defective conditions of the heart and its vessels, proved that the arterial lesion had occurred during the earlier periods of intra-uterine life. In the larger proportion of these instances, however, there existed some form or other of imperfect valvular apparatus, which must have proved more or less efficient in guarding the vessel against reflux; and, in one only—that observed by Dr. Crampton, (p. 457)—was the vessel entirely destitute of a valvular apparatus: a similar defect was also observed in the following case, which has been recorded by Dr. Favell.[*]

The subject of this extraordinary malformation was a boy, ætat. 8 years, who died of cerebral irritation. During his illness his pulse was always slow, not exceeding 70 in the minute: the boy was well developed. On placing the ear below the left nipple there was a loud souffle, and it was stated that, if the boy was much excited, or had taken active exercise, his countenance became blue. On examination after death, the heart was found to be of normal size; but, on opening the right auricle, the *foramen ovale* was seen completely unclosed, and capable of allowing the passage of the little finger. There was no communication between the right auricle and the corresponding ventricle, so that the whole of the blood must have passed through the foramen ovale. In the left ventricle, immediately behind the mitral valve, there was a large aperture through the *septum* which opened into the commencement of the *pulmonary artery*: this vessel had no valves. The right ventricle would scarcely contain a small walnut.

---

[*] Provincial Med. and Surg. Journal, vol. iii. p. 440.

This case is extremely interesting when compared with the example by Dr. Blackmore (cited at p. 749). Here we observe a singular adaptation of parts by which the immediate ill effects of the primary lesion,—complete occlusion of the *right* auriculo-ventricular orifice,—were averted: in Dr. Blackmore's case was displayed a still more extraordinary alteration in the course of the circulation consequent upon non-development or early occlusion of the *left* auriculo-ventricular opening. The faulty condition of the pulmonary artery in either case, although apparently secondary to the other cardiac lesions, was evidently the principal cause of the lividity of surface, and symptoms of cardiac obstruction, from which the patients suffered. It will be noticed that, both in this case and in that related by Dr. Crampton, the valveless pulmonary artery communicated directly with a small muscular cavity which in reality merely formed an appendix to the ventricle from which the vessel received its supply of blood: it is probable that this arrangement of parts in some degree compensated for the absence of a valvular apparatus, by preventing the refluent blood from being immediately thrown back into the ventricle from which it had been propelled. It is to be regretted that it has not been stated whether the bruit which was heard in both of these cases was synchronous with the diastole or the systole of the heart. There can be little doubt that in cases of this description rupture or inflammation of the valvular apparatus, occurring at a very early period of fœtal life, has been followed by its absorption. In another portion of this memoir I shall have to shew that, even in adult life, the valvular apparatus of the pulmonary artery may be almost entirely destroyed and removed by disease.

The pulmonary artery furnished with two semilunar valves.

Several cases of this description have been recorded, and I have already cited one by Dr. Houston, and another by M. Duret, in which the valvular defect was attended with a contracted state of the artery. In the following instances this malformation was apparently not accompanied by congenital narrowing of the vessel. It is, however, evident that, in an example of the kind adduced by Sandifort*, there must have originally existed some serious cause of obstruction at one or other of the cardiac outlets.

The heart of a 7 months male fœtus was found to be almost round. The left ventricle, which was very small, communicated with the right by a foramen in the *septum ventriculare*. The aorta communicated with both ventricles, but more freely with the right. The *pulmonary artery* was of the usual size, but was only furnished with two valves. The *arterial canal* was narrow, resembling a little branch of the pulmonary artery. There was only one left pulmonary vein.

The following case is rendered of great interest, by the fact that, in the aorta as well as in the pulmonary artery, two sygmoid curtains only had been developed.

Dr. Taylor attended a bricklayer of intemperate habits, ætat. 38 years, who died of pneumonia, pleurisy, and pericarditis, and in whom the physical signs of hypertrophy of the heart and regurgitant disease of the aortic valves were very apparent. On inspection, the heart was found to present the following lesions. The pericardium bore traces of inflammation, and contained two ounces of turbid serum. The aortic valves admitted of regurgitation; the orifice of the aorta was about half closed by numerous large vegetations adherent to the sygmoid valves; these vegetations were partly soft and of recent formation, and partly firm and calcareous; there were only two sygmoid valves in the aorta. The mitral was slightly thickened; its orifice admitted three fingers. The walls of the right ventricle were a little thickened. There were only two sygmoid valves in the *pulmonary artery*: it was not ascertained whether these valves were efficient, but they presented no disease whatever, neither thickening nor any other change.* Dr. Taylor also refers to an example of this malformation related by Briquet.

Dr. Graves details the case of a man, ætat. 66 years, who died with hydro-pericardium and pneumonia, in whose heart the following appearances were discovered. The *pulmonary artery* contained a fibrinous clot, which presented the usual division produced by the branches of that vessel. There were only two valves, and they were both coated with a recent deposition of lymph, which was, in some situations, almost a quarter of an inch thick. A small part of this lymph was accidentally removed while examining the valves, and the latter were seen much thickened and opaque; in this respect contrasting in a very remarkable manner with the valves of the aorta, which were quite free from disease.†

From the duration of the lives of several of those who have been the subjects of this kind of malformation, it is evident that the valvular defect is not necessarily attended with regurgitation, so long as the tissues of the curtains remain in a sound condition, but parts thus malformed appear to be extremely liable to undergo various morbid changes, the occurrence of which usually determines the fatal issue of such cases. This is exceedingly well illustrated in the following case by Mr. Paget:—

---

* *Observat. Anat. Path. lib. iii. c. 1.*

* Lancet, Dec. 4th, 1841, p. 314.

† A System of Clinical Medicine: Dublin, 1843, p. 905.

A girl, ætat. 20, of irregular habits, and the subject of renal disease, died apparently from the effects of an extensive deposition of coagula upon the valves and in the branches of the *pulmonary artery*. Mr. Paget found that this vessel was furnished with only two sygmoid curtains, which were thickened and opaque, and had on their free borders and adjacent surfaces large growths of brownish-yellow, soft, fibrine-like substance, which firmly adhered to them, and which had in their interior small grains of earthy substance*.

In commenting upon this case, Mr. Paget directs attention to the fact, which he believes has hitherto passed unnoticed, that in the majority of cases in which only two valves have been found in the aorta or pulmonary artery, those valves have been often extremely diseased. This fact, Mr. Paget adds, is very important; for it affords evidence (which is confirmed by several other observations) that parts which, from defective or erroneous development, are wrongly shaped, are often at the same time imperfect in their tissue, and are therefore very liable to disease (p. 188). Previously to the appearance of the above observation, it occurred to me to remark that, where absence of the septum of two of the aortic sygmoids occurs as a congenital lesion, manifest traces of a more recent disease of the valves are not unfrequently also present, in the form of irregular thickening of the ill-shaped curtains, and deposits of small fibrinous concretions upon portions of their surfaces; as, independently of the great liability of the parts so malformed to suffer from vicissitudes in the circulation, they are also very apt to be implicated in the derangements of the heart and its appendages which frequently coexist in these cases†.

Absence and congenital closure of the arterial duct.

Independently of those cases in which the office of a ductus arteriosus is found to be performed by a distinct vessel passing from the right ventricle to the aorta, and of those in which the place of the duct is supplied by a communication between the pulmonary artery and one of the large vessels of the arch, there are several kinds of cardiac malformation in which there is every reason to believe that closure of the duct exists as a congenital lesion. Although, in the majority of these cases, no vestige of the duct is discoverable subsequently to birth, it does not appear probable that, in any instance, this canal has been originally wanting; unless we presuppose the existence of some primary defect in the branchial vessels. It seems to be more feasible that the communication in question, having been rendered unnecessary by the establishment of certain abnormal conditions in other portions of the cardiac apparatus, has either become closed at the period when the arterial root and branchial vessels assumed the condition of the primitive, systemic, and pulmonary arteries, or has undergone contraction and absorption at a somewhat more advanced stage of fœtal existence.

Absence of the arterial duct has been observed in coincidence with the following conditions of cardiac malformation:—where the ventricular portion of the heart is single, giving origin to a single arterial trunk;—where a single artery originates from ventricles which are partially divided by a septum;—where the pulmonary artery is narrow. Absence of the duct has also been observed (by Dr. Blackmore) in the case, already cited, of obliteration of the mitral orifice with narrowing of the pulmonary artery, and has been remarked in a singular case of transposition of the aorta and pulmonary artery which will be detailed in a subsequent part of this memoir. The two latter instances appear to be solitary examples of this kind of lusus; but, in the three former kinds of malformation, it has been more frequently observed. Allusion has been already made to the fact, that, in those instances where the ventricular portion of the heart is single, giving origin to a single arterial trunk or to a distinct aorta and pulmonary artery arising by separate orifices, or in which the ventricles, communicating by an opening in the septum, send off an artery which afterwards separates into pulmonary and systemic branches, the ductus arteriosus is absent,—this peculiar arrangement by parts rendering its presence unnecessary. I shall quote the following examples in illustration of this point; as instances of these kinds of malformation are of by no means frequent occurrence.

In a male fœtus, of eight months, F. R. Meckel* found the heart to be nearly equal in length and breadth; its apex was divided into two tubercles. The aorta, which was one-half wider than natural, arose from the middle of the base over the septum, there giving off a very narrow *pulmonary artery* as a branch which passed behind the trachea towards the vertebral column. There was *no canalis arteriosus*. The *septum of the ventricles* was perforated by an opening of the measure of one line vertically, and four lines in width*.

---

* On Obstruction of the Branches of the Pulmonary Artery: Medico-Chirurgical Review, *vol. xxvii. p.* 182 (1844).

† *Guy's* Hospital Reports, vol. vii. p. 408 *(Oct. 1842).*

* Reil's Archiv. Bd. 9, p. 437, quoted by Hein.

In the following case the malformation was in some degree analogous to that observed by Ant. de Pozzi, Tiedemann, Chemineau, and others (in cases cited at pp. 276—278). But the heart, although essentially single, in reality presented four cavities.

In 1842, a female child, ætat. 4 months, and of whom it was impossible to obtain any precise information, was deposited in the Hôpital des Enfans Trouvés, of Paris. The child was seized with dyspnœa several times in the course of the day, the attacks being accompanied with a bluish tinging of the whole surface of the body; it was accordingly sent to the infirmary. Here, on the ensuing day, it presented general cyanosis, and the tongue, anus, genitals, and adjacent parts, were of a blackish-violet colour. Asphyxia supervened five or six times in the twenty-four hours. The heart beat 136 times per minute, and a marked *bruit de soufflet* replaced the normal sound in the heart during its diastole. About ten days after this, the child died of dyspnœa: nearly all the anterior half of the thorax was found occupied by the pericardium, and, on laying open this, it was seen that the heart consisted of only one ventricle and one auricle, the deep sulcus between which was filled up with a process of the left lobe of the liver (with, of course, a portion of the diaphragm). The auricle, which was much larger than the ventricle, was nearly spherical, and its sides, which were about one-eighth of an inch in thickness, were furnished internally with strong columnæ carneæ (musculi pectinati?). At its posterior part the two venæ cavæ opened into it by a common mouth, or a sort of sinus, apparently a rudiment of a right auricle. The pulmonary veins terminated in their ordinary manner. The ventricle was of a conical shape; its walls were much thicker on its left than on its right side. Three openings existed in its base. The auriculo-ventricular closed by a true mitral valve, the aortic opening; and on the right side of the latter an opening into a cylindrical sac which seemed to represent the right ventricle, but had no communication with the auricle. The *ductus arteriosus* was wanting. There was no malformation in any of the viscera except the heart, nor in any part of the arterial system†.

Here the circulation must have pursued exactly the same route as in the case by Dr. Favell, cited at the commencement of this chapter: but, in the present instance, the malformation appears to have been more extreme, especially that of the auricular portion of the heart.

M. Hein (op. citat. p. 29) appears to have been the first author who noticed the coincidence of absence of the arterial duct with great narrowing of the pulmonary artery; citing the cases by Otto, Knox, Meckel, and Steno, in illustration of this fact. To these instances I have added the examples by MM. Lexis, Aran, Huss, Gintrac, and Dr. Blackmore*, which taken together are sufficient evidence of the fact that narrowing of the pulmonary orifice is frequently attended with absence of the arterial duct. It is difficult to account for the occurrence of this coincidence otherwise than by concluding that early obliteration and absorption of the duct has been followed by an imperfect development of the artery; the canal of which has, up to the period of birth, remained merely of sufficient size to transmit the slender current of blood which circulates through the lungs previously to the commencement of respiration†.

The question of the *possibility of closure of the arterial duct occurring previously to birth* is one of extreme interest and importance, especially in a medico-legal point of view. That the passage may become closed during the earlier stages of intra-uterine life is rendered certain by the facts already adduced; whether occlusion of the canal and conversion of its tissues into an impervious cord can occur at a later period of fœtal existence is a more doubtful question, but one which I believe may, not improbably, be ere long answered in the affirmative.

A case has recently occurred at Ayr, in which there appears to be strong reason to believe that closure of the duct had occurred previously to birth. The medical facts of this case, so far as they have been afforded, are as follow. The body of a female child was discovered buried in a waste ground enveloped in a woollen bag. The body was found to be in a state of putrefaction, with desquamation of the cuticle. It weighed five pounds, and was twenty inches in length. Its mouth and nostrils were stuffed with flax. The umbilicus was in the centre of the body, the cord cut close to the abdomen, and left without ligature. The scalp was covered with hair, and the nails were full-grown; a large portion of the brain, which had been reduced to a pulpy state, had escaped through the openings of the skull. There was an extensive ecchymosis all over the fore part of the neck, and an effusion of blood on the exterior of the trachea. The heart and lungs weighed one ounce; the lungs were collapsed: the right was considerably decomposed, and sunk when put in water. The left was of a red colour, and firm in texture, and floated on the surface when immersed in a vessel filled with water; but on pressure there was no crepitation. The right side of the heart was filled with coagulated blood, the *foramen ovale* partly open, and the *ductus arteriosus* impervious. The liver was large, and of a leaden hue; the *ductus venosus* almost obliterated, and the meconium was found in abundance in the lower bowels.

---

* This case almost precisely resembles one related by M. F. Tiedemann, and cited at the commencement of this paper (p. 277). I had *not* met with this instance *when I cited that by M. Tiedemann.*

† *Gaz. des Hôpitaux, Supp. Dec. 1842,* and *Lancet, 1843.*

* While citing examples of narrowing of the pulmonary artery attended with absence of the ductus arteriosus, I omitted an example related by M. Deguise, and cited by M. Ollivier, Dict. de Méd., art. Vaisseaux Pulmonaires, of a woman, ætat. 20, who suffered from cyanosis, debility, palpitation, and dyspnœa; a bruit de souffle was prolonged in the course of the *pulmonary artery*. On inspection, this vessel was found to be extremely narrowed. The ventricles and auricles respectively communicated with each other, and the *arterial canal* was absent. The precise meaning of the latter expression is rather doubtful.

† Otto alludes to other instances observed by Stenson, Bartholini, Kreysig, and Chemineau, in which the duct was entirely absent, and also makes slight reference to the existence of the same defect in a monster, with abdominal cleft and hernia cerebri, but I am not acquainted with the details of these cases, unless the instance by Chemineau be one of non-development of the ventricular septum, to which I have alluded at the commencement of this paper.

Strong circumstantial evidence was adduced to prove that this infant came into the world alive shortly before 6 o'clock A.M, and that its body was deposited in the spot where it was subsequently discovered between 10 and 11 o'clock, A.M. on the same day. This train of evidence, if confirmed, would lead to the conclusion, either that the duct became closed almost immediately after birth (for it cannot be believed that this infant survived its birth more than four hours and a half, to say nothing of the probability that it did not respire even for so many minutes), or that the child had come into the world with the duct nearly or quite closed.* The facts of this case, however, were not proved in a sufficiently demonstrative manner to render it an example upon which it is possible to argue with any degree of certainty; still, it is one, which unquestionably very decidedly suggests the probability that closure of the duct in the ordinary manner may occur previously to birth, and one which strongly shows the necessity for further examination of this most important physiological question. No fact can be more clearly ascertained than *that the* foramen ovale may become closed *previously* to birth; and it appears to me *that*, as the question at present rests, no medical witness is justified in declaring that the existence of a contracted or closed state of the arterial duct is a certain evidence that the infant has respired*.

We have, at present, no absolutely demonstrative knowledge of the causes which naturally produce the closure of the arterial duct: we are, therefore, not justified in declaring that those causes may not, in certain instances, be brought into operation previously to the birth of the child; many instances of cardiac malformation countenance this idea, and there are numerous facts which, to a certain degree, suggest, although they do not absolutely confirm, an opinion that the commencement of the process of contraction in the ductus venosus, foramen ovale, and arterial duct, may possibly be among the causes which determine the expulsion of the fœtus from the uterus at the ninth month.

Low division of the pulmonary artery.

The pulmonary artery has, not very unfrequently, been found to divide into its two main branches at a very short distance above its origin. In examining the body of a young girl who died of a passive aneurism of the left cavities of the heart, M. Cassan found that the pulmonary trunk did not, in reality, exist at all, but that the vessel divided just above its origin into its two branches. These two branches were of the ordinary width.†

In the case by Mr. Bloxham, already cited, of a child, ætat. 3 years, the pulmonary artery was extremely narrow, and bifurcated immediately on its exit, so that the trunk was not, in any part of its circumference, more than a line in length. Slighter degrees of this kind of malformation are not unfrequently noticed.

MALFORMATION BY EXCESS OF THE PULMONARY ARTERY.

The pulmonary artery arising from the heart by a double origin.

The only instance of this kind with which I am acquainted is that related by Kerckring.‡ The subject of this malformation was an infant about 3 months old, in whom the heart was divided into three ventricles; *i. e.* the right was double, and from each of its two cavities there arose a pulmonary

---

[* A full report of this important trial will shortly appear in the Gazette.—Ed. Gaz.]

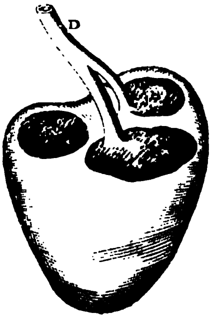
* It does not appear to have been stated in evidence in the above case whether the pulmonary orifice and other portions of the heart and its appendages were in a natural condition. In any instance where there exists narrowing of the vessel or any other serious malformation of the heart, or in which those who examined the body have neglected to observe the previous condition of each cavity and outlet of that organ, the fact of obliteration of the arterial duct certainly cannot be received as a proof that the infant has been born alive.

† Archiv. Génerales, P. S. t. xiii. p. [illegible]

‡ Spicilegium Anatomicum, Obs. [illegible], p. [illegible]

artery which united above into a common trunk. The heart had been carelessly removed from the body for another purpose, so that the distribution of the cavæ and other vessels which had been cut away was not observed.

Neither the above account, nor the representation of the heart (which is exactly copied from Kercking's plate in the subjoined cut), render it perfectly clear that the vessel which took its origin from the two ventricles was, in reality, the pulmonary artery. More than one case has been recorded in which the aorta arose by a double origin;[*] and, upon examination of the figure, it will be observed that the long single vessel formed by the union of the two ventricular branches has rather the appearance of an aorta than of a pulmonary artery.



B, Two right ventricles of the heart.
C, Left ventricle.
c, Pulmonary artery given off from both right ventricles.

Unusual number of valves.

The instances in which the pulmonary artery is found to be furnished with four sygmoid valves are by no means extremely rare.[*] Dr. Todd (Cyclop. of Anatomy and Physiology) speaks of the occurrence of five valves in this vessel; Malcarne (quoted by Dr. Graves) mentions a case where the aorta divided soon after its origin, and was furnished with five valves, but I have not been able to meet with the details of any example in which a similar arrangement occurred in the pulmonary artery.

Dr. Theophilus Thompson has collected some interesting facts with relation to this species of irregularity in illustration of the following case[*]:—

The author was requested to visit a woman, æt. 38, suffering from great drowsiness, with lividity of the complexion, a purple and swollen state of the lips, distension of the external jugular veins, and anasarca. The pulse was rapid and feeble; the impulse of the heart rather weak; the first sound shorter, and more flapping, the second less distinct, than natural; both sounds were, however, unattended with roughness, and there was no evidence of any obstacle to the circulation. The debility gradually increased, her legs became more and more œdematous, and at length erysipelatous and gangrenous, when she died. This patient, although never robust, had enjoyed an average share of health until attacked with Asiatic cholera during the prevalence of that disease in this country, after which her strength was permanently impaired, and she occasionally complained of palpitation of the heart on going up stairs. Two years before her death she suffered from an attack of fever. From this time she exhibited a livid complexion, and a peculiar drowsy apathetic appearance, which induced visitors to suppose her idiotic. On inspection, there was found some effusion into the peritoneum, pleura, and pericardium, and serous infiltration, with redness of the bronchial tubes. The heart was larger than natural, and exhibited a circumscribed dilatation at the part of the right ventricle more immediately connected with the right ventricle. This ventricle was found to be formed of two cavities, separated from each other by an imperfect septum. This septum was composed, not of a uniform fleshy wall, but of decussating and hypertrophied columnæ carneæ, some of which, separating from each other near the base of the ventricle, left an aperture of communication about an inch long and half an inch broad. The arterial chamber of the right ventricle was rather less spacious than that adjoining the auricle, which corresponded in size and appearance to the right ventricle in its natural condition. The connecting orifice was partially covered by one of the divisions of the tricuspid valve[†].

---

[*] Dr. M. E. White, of Carlow, has described the heart of a double-headed fœtus in which there were three ventricles, but here a single vessel was placed anteriorly, and gave off a single pulmonary trunk; while, from the two posterior cavities, the systemic vessels arose. (Dublin Medical Press, vol. i. p. 212.) Dr. Chichester has detailed (Loudon's Magazine of Nat. History, vol. i. p. 135, quoted by Dr. Paget) the appearances observed in the dissection of a monstrous sheep, with one head, one heart, and one stomach, but with the rest of the body generally double: from each ventricle sprang an aorta: of the two vessels one turned to the right, and the other to the left. The one which turned to the left went down in the natural direction, while that which turned to the right crossed the right vertebral column, and passed down on the outer side of it. A transverse canal of somewhat small calibre passed down from the beginning of the turn of the arch on one side to the same part on the other side, thus forming a communication between the two aortas.

[†] Dr. Graves refers (in his Clinical Medicine, p. 905) to the specimens in the College of Surgeons of Ireland, which exhibit the aorta with four valves.

[*] Med. Chir. Trans. vol. xxv. p. 247.

[†] A malformation of the right ventricle in some measure similar to that observed in Dr. Thompson's case, but unaccompanied with an analogous state of the valves, has been described

The walls of the left auricle, and of both the ventricles, were of natural thickness; but the right auricle was twice as thick as the left. The *pulmonary artery* was furnished with four valves, which were found, on admeasurement, equal in size. Each of the valves was well-developed, furnished with a corpus sesamoideum, and about nine-tenths of an inch in diameter. As each of the valves was of natural size, an additional valve was rendered necessary by the preternatural width of the pulmonary artery, the circumference of which exceeded that of the aorta by nearly an inch. The author justly observes, that this specimen furnishes an exception to the rule laid down by Meckel, "Omnes in eo conveniunt valvulæ numero imminutas mote augeri, numero auctas mole minui."

It will be found, however, that the first, third, and fourth of the following examples, corroborate the statement of Meckel, and correspond with two cases observed by Petsche and Bizot*, in one of which the additional valve was found singularly small, in the other quite rudimentary. The first in some measure corresponds with an instance mentioned by Morgagni, in which one of the valves was larger than the rest. In the fifth instance the condition of the artery closely resembled that described by Dr. Thompson, the whole of the valves being regular and symmetrical in form.

In the Museum at Guy's Hospital there are four preparations (numbered 1435^{35} 1413$^{25-30}$) in which various modifications of this condition of the artery are remarkably well displayed.

In one of these, three of the curtains are well formed, but the vessel is also furnished with an additional sygmoid pouch, which is capable of holding a pea.

In a second there are four valves, but the septum between two of these is longer than that which separates either of the others, the free edges of the curtains having apparently been stretched downwards.

In the third specimen there is a very minute imperfectly formed additional valve, formed by a little curtain supported above by slender isolated cords; these cords attach the upper margin of the valve, almost at its central part, to the arterial walls.

The fourth preparation displays a still more minute extra valve, which is not only attached laterally to the artery by tendinous cords, but also presents a thin membranous bridle, which extends upwards from that portion of the free edge at which the corpus arantii is usually situated, and is united with the arterial wall above. This is the only specimen which I have seen in the human subject where a sygmoid curtain was attached to the artery by a tendinous cord occupying the situation of the corpus arantii, but such an arrangement of parts is observed to be permanent in the upper row of valves defending the aorta of the shark; and there is every reason to believe that, in the human heart, the primitive condition of a sygmoid valve is that of a membranous curtain attached to the vessel at its upper part by isolated tendinous cords. I have stated the grounds on which this conclusion is formed in a previous Essay*, and I have no doubt that the corpora arantii are the vestiges of the attachments of the central chordæ tendineæ of the valves.

The same collection also contains another specimen (marked 1413) which presents four perfectly symmetrical valves, which are in every respect healthy and natural in structure, except that here, as in most of the other specimens, some of the lateral attachments of the curtains are formed by isolated cords. A condition of parts which I believe to be in every instance congenital, and not the result of atrophy of the tissues of the valves.

Origin of extra branches from the pulmonary artery.

A few instances have been noticed in which one or other of the subclavian arteries took its origin from the pulmonary. Breschet† mentions a case in which the left subclavian arose from this vessel; and J. F. Meckel‡ has described the origin of the right subclavian from the division of the pulmonary artery in a calf. Instances in

---

by Dr. Fletcher. The man from whom the specimen was taken was about 63 years of age, an itinerant collector of rags, who, after a walk of five or six miles, was found dead in his bed. It was stated that he had latterly been rather asthmatic. The tricuspid valve was healthy; across the cavity of the right ventricle was a muscular partition, dividing it into two unequal parts, the larger next the auricle, the smaller communicating with the pulmonary artery. The partition seemed made up of carneæ columnæ, and was perforated by an opening capable of admitting the little finger, the edges being semicartilaginous; an opening large enough to admit a goose-quill communicated with the left ventricle, and the larger cavity of the right ventricle. The foramen ovale was capable of being opened by a probe. The left auricle and mitral valve were healthy; in the left ventricle the opening from the right ventricle was seen before (below?) the origin of the aortic valves, two of which had ossific deposits in their substance. The aorta was slightly dilated. The veins of the arachnoid were congested, and there was effusion of fibrinous serum between this membrane and the pia mater.

A case by M. Obet, in which a very similar condition of the ventricle was observed in connection with arctation of the pulmonary orifice, has been already detailed.

* Haller, Collect. Anatom. Dis. vol. vi. p. 774;—Mém. de la Société d'Observation, vol. i., quoted by Dr. Thompson.

* Guy's Hospital Reports, vol. vii. p. 414, and plate 1.

† Quoted by Hasse.

‡ Tabul. Anat. Path. Fas. ii. p. 2. cited by Otto.

which the descending aorta, left subclavian, &c., apparently arose from the pulmonary artery, and in which the latter vessel communicated with the innominata or left subclavian, belong more properly to another division of this subject.

The lungs supplied by additional branches from the systemic circulation.

In the course of the foregoing observations, various instances have been alluded to in which obliteration or contraction of the pulmonary artery was in some measure compensated by the existence of branches passing to this vessel from the subclavians, or arch of the aorta, or by the establishment of a permanently dilated condition of the aortic bronchial arteries. In addition to these, Otto refers to several cases in which, besides the usual pulmonary artery, the lungs were supplied by accessory arterial branches; for example, an instance where a large branch from the aorta, in the region of the sixth dorsal vertebra, passed to the lobes of the right lung[*]. Another case, where a single twig passed to the under lobe of the left lung[†]; and one in which very small pulmonary arteries passed equally to both lungs from the pericardial arteries[‡].

A very remarkable instance of this kind has been related by M. A. Maugars, of Angers.[§] The subject of this malformation was a child, æt. 7 years, in whom a considerable artery, which arose from the superior anterior and right side of the abdominal aorta, and ascended between the aorta and œsophagus, entered the chest through the œsophageal opening of the diaphragm, having given off, at a short distance from its origin, the right sub-diaphragmatic artery. Immediately above the diaphragm, and above the œsophagus, it divided into two branches. Each of these entered the posterior inferior and internal part of either lung, and was distributed throughout the inferior lobes. The trunk of the artery, and its principal divisions, gave off no other branch than the sub-diaphragmatic, and were not accompanied by any corresponding vein. The trunk and right branch of the pulmonary artery itself were of the ordinary dimensions, but the left branch was much smaller than usual, not equalling the right by one-half. This defect was evidently compensated by the accessory branch from below. On injecting the pulmonary arteries, it was found that they inosculated freely with the branch derived from the abdominal trunk. The pulmonary veins were distributed in the usual manner. The lungs were sound, but were rather larger than usual. The heart was also rather enlarged.

This last case appears to afford a type of the whole of the instances in which the lungs are supplied with accessory vessels from the aorta or its branches, an arrangement which seems to have been invariably determined by the existence of some considerable impediment to the circulation through the pulmonary artery during the earlier periods of cardiac development. There are strong reasons for believing that, in many instances of contraction and obliteration of the pulmonary ostium, these lesions have been partially compensated by the distribution of additional arterial branches from the systemic vessels to the lungs, an arrangement which has been overlooked in dissection. It would add greatly to our knowledge of the abnormal anatomy of the blood-vessel system if the plan of injecting the arteries and veins, and then carefully dissecting the parts *in situ*, were adopted in every case where there was reason to believe that death had resulted from congenital malformation of the heart.

[To be continued.]

POISONING BY MUSHROOMS (HELVELLA ESCULENTA.)

On the 19th April last, Dr. Keber was called to see a family, consisting of the father, mother, and four grown-up children, all of whom were labouring under violent vomiting. It appears that they had had for supper a dish of red mushrooms, and that they were attacked with vomiting in the course of the night. Twenty hours had already elapsed; but Dr. K. prescribed emetics and purgatives. Injections of vinegar, with cold wet compresses to the head, were ordered. The vomiting continued for more than twenty-four hours afterwards, and in the case of the mother for forty hours. The vomited matters consisted of green vegetable matter, in the midst of which portions of mushroom were perceptible. One girl, æt. 18, fell into a state of coma, from which she did not recover for three days. A remarkable symptom, which was observed in all the six patients, was, that they became jaundiced over the whole body, so soon as the vomitings had ceased. In eight days they had all recovered. M. Keber satisfied himself by a careful examination that the mushrooms were of an esculent kind *(morilles)*. Some were of a rather deeper colour than usual, probably owing to the wetness of the season; and they had not been well cleaned before they were dressed. Dr. Gerpe reported to Dr. Keber, that about the same period, three persons, who had partaken of the same mushrooms, had died after having suffered from similar symptoms. —*Gaz. des Hôpitaux*, Oct. 10, 1846.

---

[*] Huber, in Anat. Helvet. vol. viii. p. 85.

[†] J. F. Meckel, in his Archiv. f. d. Physiol. vol. vi. p. 454.

[‡] Jacobson, in Meckel, vol. ii. p. 154.

[§] Sidellot, Recueil Period. vol. xiii.; and in Corvisart, Journ. de Méd. An. x. Pluv.

REMOVAL OF A

SCIRRHOUS TUBERCLE FROM THE SOFT PALATE BY LIGATURE.

By John Adams, Esq. F.R.C.S.
Assistant-Surgeon to the London Hospital.

The report of solitary instances of disease and operation is in my mind only justifiable from the extreme infrequency of the case reported; hence, I am induced to forward a brief description of this case, as the disease in the situation now under consideration is so rare as scarcely ever to have been met with: indeed, I am not acquainted with a single recorded instance in which scirrhus can be said to have commenced in the soft palate independently of the adjacent structures.

August 20th, 1846.—A robust, and apparently healthy man, 30 years of age, applied at the London Hospital at the request of Mr. Kennedy, of Stratford, in consequence of a tumor on the left side of the velum palati. He stated that three years ago he perceived a small lump in that situation, which has continued gradually to increase in size but has been attended with no pain or inconvenience until lately; but it now begins to interfere with the power of swallowing. The tumor, when examined, appeared about the size of a small walnut, was somewhat oval in shape, the long axis being from above downwards, and was evidently situated in the substance of the velum palati between its anterior and posterior mucous surfaces. It presented a somewhat whitish aspect from the stretching of the anterior layer of the velum over its surface, to which it was firmly adherent. The velum was perfectly moveable, and the tumor was drawn up at every movement of the palate, and a bent probe could be introduced behind it. It had a remarkably hard feel, and on running the finger over it, it gave the idea of true scirrhus.

I had no hesitation in giving an opinion on its nature, and on the propriety of attempting its extirpation by one of two methods—namely, by excision, or by the ligature. The former could have been accomplished with perfect facility, for the man had an enormous mouth, and possessed a remarkable power over the muscular apparatus in that cavity: but the fear of hæmorrhage deterred me from this operation, and I therefore adopted the alternative of endeavouring to strangulate the tumor by ligature. This was accomplished with some difficulty by the introduction of armed needles, and with an instrument of firm, though inflexible silver, having a steel point, armed with a long ligature, and let into an ivory handle. By these means the whole of the tumor was encircled, and the ligatures being tightened, it was at once apparent that its complete strangulation had been effected. Very slight constitutional disturbance ensued, and on examination on the following day the tumor was evidently sloughing. Five days after the operation I removed the greater part of the mass, leaving a large sloughy-looking wound: the slough, however, had no tendency to spread. By the frequent gargling with a solution of chloride of lime, a healthy granulating action was induced, and it began to heal rapidly. In the course, however, of a few days a warty vegetation sprang up from its surface: this has been gradually destroyed by the repeated application of solid nitrate of silver, and the disease is perfectly cured.

Remarks.—I have termed the disease scirrhus, but it may be said that there is no distinct evidence of its scirrhous nature. Of course, it is impossible *positively* to assert its nature, as no examination could be made of it when in a state of slough; but that it was not an ordinary scrofulous tubercle (the only disease likely to be confounded with it) I am certain, from the distinct traces of its organisation when examined after its removal, and from the resistance offered to the introduction of the grooved needle prior to the attempt at its extirpation.

31, New Broad Street,
Nov. 23, 1846.

THE HÔTEL DIEU OF PARIS.

This ancient and celebrated hospital is about to be converted into an infirmary for the reception of aged persons as boarders. The plan has already been in part carried out; some of the patients having been transferred to the Military Hospital of Charonne. As soon as the new Hospital of Louis Philippe is completed the patients will be entirely removed from the Hôtel Dieu.

ON A

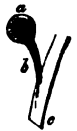
NEWLY-DISCOVERED GANGLION,

Of very simple Form and Structure.

BY T. WHARTON JONES, F.R.S. &c. &c.

THE other day, whilst examining under a magnifying glass the lenticular ganglion and ciliary nerves of a dog two or three months old, I noticed a minute roundish body (somewhere about 1-60th of an inch in diameter), connected by a short pedicle to the largest of the ciliary nerves, at a point nearer its entrance into the eyeball than its origin from the lenticular ganglion.

From the appearance of the body, suspecting it to be a ganglion, I subjected it to careful microscopical examination, and discovered it to be, indeed, a small collection of ganglionic corpuscles, from among which there proceeded nervous fibrils, which, being collected into a fasciculus, constituted the pedicle by which the body was joined to the ciliary nerve. The annexed is a magnified diagram of the structure.



a, the ganglion; *b*, the fasciculus of nervous fibrils, forming the pedicle joining it to *c*, one of the ciliary nerves. The ganglion of the right side, here represented, had a longer pedicle than that of the left.

We have thus here a *ganglion cæcum*, if I may use the expression—a ganglion into which no nervous fibrils enter and again pass out, but from which only nervous fibrils arise! Such a structure,—so far as I know, hitherto unobserved,—is an exemplification of what alone is essential in the structure of a ganglion; viz. a mass of ganglionic corpuscles, and nervous fibrils proceeding from it.

It is scarcely necessary for me to observe, that the ganglion, which I may name *ganglion cæcum ciliare*, has nothing in common, as regards structure, with a *Pacinian body*.

In the cat, the only other animal in which I have yet looked for the same ganglion, I have found, at the corresponding part of the corresponding ciliary nerve, a small ganglionic mass; not, however, connected by a pedicle to the nerve, as in the dog, but closely applied to its surface.

George Street, Hanover Square,
November 7, 1846.

TABLE OF DEATHS OCCURRING IN PRIVATE PRACTICE,

AS REGISTERED FROM AUGUST 29, 1845, TO AUGUST 29, 1846.

BY GEORGE MAY, ESQ.
Surgeon, Reading.

THE scanty materials of the accompanying table make it of little value *per se*, but if similar tabulated records were largely multiplied, they might assist the present excellent system of registration, "in collecting accurate materials for advancing the science of vital statistics."

The column noting the *mode of death* will be found important, as indicating the tendency to death in each particular disease. The column for remarks, &c. may be rendered of especial value, each record presenting a brief but comprehensive history of the disease, and a test for the accuracy of asserted, analogous, and antagonistic diseases.

It is deeply to be regretted that post-mortem examinations are so infrequent. The incessant occupations of an active professional life make it impracticable to devote sufficient time to these duties; nor, in the mixed practice of the majority of medical practitioners in this country, can anatomical investigations be regarded as free from serious objections. Until they be compulsory and general, conducted by officers specially appointed and qualified, and the results be compared with faithfully reported histories of disease, pathological statistics will remain imperfect, diagnosis fail to be precise, and therapeutics be proportionately unsound and unsatisfactory.

TABLE, &c.

TOTAL 37; BEING MALES 12, FEMALES 25.

Disease.					Sex.	Age.	Date.	Duration.	Mode of Death.	Remarks, co-existing, or pre-existing Diseases.
HEAD 5	Males . . 3 Females . 2			Dementia, with melancholy .	M.	42	Sept.	3 months	Asthenia	
				" Senile . .	F.	87	Aug.	6 or 7 years	Ditto	Amaurosis, cerebral, both eyes; gradual exhaustion.
				Paralysis, hemiplegic, left .	F.	85	April	10 days	Ditto, coma	
				Convulsions, Centric . .	M.	7 mo.	Feb.	1 month	Coma	Pertussis.
				Ditto Ditto . .	M.	6 mo.	May	6 days	Ditto	
LUNGS 14.	Females . . 9	Phthisis . . . 8	Males . . 1 Females . . 7	Preceded by Pleurisy . . 2 Ditto by Hæmoptysis . . 1	M.	50	Nov.	5 months	Asthenia	Pneumonic degeneration, preceded by pleuritis 2½ years before.
					F.	27	Nov.	6 months observed, probably 3 or 4 years	Syncope	
					F.	44	Dec.	4 months	Apnœa	Left lung, preceded by pleurisy 9 months before.
					F.	45	Jan.	1 to 2 years	Asthenia, apnœa, syncope	Both lungs.
					F.	44	April	10 weeks observed	Asthenia, apnœa	Preceded by hæmoptysis.
					F.	22	June	1 year observed	Apnœa	Extreme emaciation.
					F.	11	June	6 months observed	Do.	Hereditary predisposition, paternal and maternal.
					F.	30	July	1 month observed, probably 2 or 3 years	Do.	Most prominent symptom, chronic laryngitis.
	Males . . . 5	Pneumonic diseases 6	Males . 4 Females 2	Broncho-Pneumonia. M. 2 | F. 2	F.	73	Aug.	9 weeks	Apnœa, coma	Ulcer of uterus, with prolapse, simple, existed several years.
					M.	84	Sept.	10 days	Do. do. Asthenia	Prostatic enlargement.
					F.	60	Jan.	4 days	Apnœa	
					M.	3	Jan.	2 months	Asthenia, syncope	Pertussis.
				Pleuro-pneumonia .	M.	1 year	June	15 days	Apnœa, syncope	
				Pneumonic congestion .	M.	71	Sept.	Sudden	Mode not observed	*Post-mortem.* — Occasional retention of urine; hematuria just before death; 3 calculi in bladder; disease of bladder and kidneys.

Heart 6 Males . 1 Females 5	Mitral Disease		2	F.	55	Dec.	Some years	Syncope	Liver, anasarca.
	Do.			F.	49	May	Ditto	Syncope, sudden	Severe occasional dyspnœa.
	Cyanosis			F.	7 wks.	July	Congenital	Asthenia, syncope	Foramen ovale open and large; valves of pulmonary artery coarcted; right side of heart hypertrophied. Post-mortem.
	Hypertrophy			F.	46	Aug.	Some months	Sudden, not observed.	Inquest. Verdict, visitation of God.
	Dilatation		2	M.	49	Oct.	5 or 6 years	Asthenia	Liver and kidneys. Ascites, anasarca.
	Do.			F.	54	Dec.	Some years	Syncope	Congestion of lungs.
Abdomen 6 Males . 2 Females . 4	Stomach ulcer			F.	42	March	5 days	Asthenia, syncope	*Post-mortem.* — Small ulcer of stomach; vessel opened; large quantity of blood in intestines.
	Diarrhœa			F.	42	Sept.	14 days	Ditto	Tuberculous lungs.
	Liver		2	F.	65	Dec.	Some years	Asthenia	
	Do.			M.	77	Jan.	Ditto	Syncope	Retention of urine some years; melœna one day before death; used catheter himself.
	Do. and kidneys . . .			M.	33	July	6 weeks observed; reported many months	Asthenia, coma	Delirium tremens. Gin-drinker.
	Bladder; ulceration . . .			F.	75	March	3 months	Asthenia	
Carcinoma 3	Primary. Mammæ both	Secondary. Liver and lungs		F.	50	March	Many years	Ditto	Right elbow and arm were burned 15 years before; amputation of arm in Royal Berks Hospital; disease returned in stump about 2 months afterwards; the general symptoms were, dyspnœa, cough, hemoptysis, debility. *Post-mortem examination.* — Cancerous deposit in both lungs; scattered, and nodulated, and in masses between the pleural surfaces; heart considerably thickened on right side by infiltrated deposit; large nodulated deposit in liver.
	Arm	Liver and heart		F.	52	April	Many months	Ditto	
	Labia pudendi, and vagina.	no secondary deposit.		F.	58	May	1½ years	Ditto	
Rheumatism	Chronic			F.	64	Jan.	Many years	Ditto	Hydatid breast, left.

Disease.		Sex.	Age.	Date.	Duration.	Mode of Death.	Remarks, co-existing or pre-existing Diseases.
Car-buncle	Back of neck	M.	68	May	1 month	Apnœa	Intelligent unto death; paralysis, hemiplegic, right, a few days before death; urine not observed.
Fever		F.	6	June	25 days	Syncope	Epistaxis, exhaustion, syncope after erect posture; no regular treatment, being unmanageable.

Deaths, sudden	3
Inquest	1
Post-mortem examinations . . .	3

MODE OF DEATH.

Apnœa . .	8	Coma . .	2
Syncope . .	6	Asthenia .	19

Not observed 2

MEDICAL GAZETTE.

FRIDAY, NOV. 13, 1846.

The Seventh Annual Report of the Registrar-General, which has lately reached us, offers additional proof, if any were required, of the utility of the Registration Act, and of the skill and ability with which the provisions of that important measure are carried out. On more than one occasion we have directed the attention of our readers to this subject, and have called upon them, as friends to their profession and to the cause of humanity, to aid the Registrar-General in his efforts to procure an efficient registration of the causes of death. Some time since we published the substance of a circular letter, issued from the Register Office, and addressed to all authorized practitioners throughout the country, impressing upon them the importance of giving written certificates of the causes of death. An explanatory statement and blank certificates were furnished by the Registrar-General to all applicants; and thus the task imposed upon each member of the profession was so slight as scarcely to require consideration. It is satisfactory to find that the appeal was not made in vain, and that, with very few exceptions, the members of the medical profession have shown themselves above all sordid motives, in reference to the performance of a public duty for which no remuneration could possibly be offered.

"My appeal to the medical profession," observes the Registrar General in this Report, "has been responded to in the manner I anticipated; and I am happy to be enabled to report that, with rare exceptions, the members of that liberal and enlightened profession now generally state in writing, for the purpose of registration, the particulars respecting the fatal diseases which come under their notice. From their exertions, I hope that a correct knowledge may be obtained of the comparative prevalence of various mortal diseases, of the localities in which they respectively prevail, and the sex, age, and condition of life which each principally affects; and I trust that the abstracts which in future years I shall be enabled to publish will form a useful addition to the records of the vital statistics of this kingdom.

"An inconsiderable number,—*perhaps fifty persons*,—of the medical profession have refused to return the causes of death, for very various reasons: one gentleman, because a factory-inspector had displeased him (!); another, because he had not been elected a medical officer under the new Poor Law (!); another, because the remuneration under that law is insufficient (!); and another, because he is not specially paid for signing the written certificate."

Our readers will, we are sure, agree with us that, with the exception of that based on the non-payment of a fee, the reasons here assigned are unsatisfactory, and unworthy of men belonging to a liberal profession. We are quite aware that medical men are, on the whole, badly remunerated for the public services which they render to the State; but they have, in most cases, only themselves to thank for the degrading terms which are offered for medical attendance on the poor. So long as they display a tradesman-like competition in struggling for a salary far below the wages of a mechanic, they must expect that those who take care of the public purse will apply to them, as to others, the iron rules of political economy, and select the lowest bidder. That a medical man should make private pique or any personal feeling a motive for not certifying to the cause of death of a patient, is so unreasonable and absurd, that, but for finding it here recorded, we should have scarcely given credit to the statement.

Some of the fifty, however, object, because no fee is paid for filling up the certificate. There is some apparent reason in this objection; but when we consider the smallness of the service rendered,—the benefit which is conferred on the profession itself by an accurate tabulation of such facts, leading to important improvements in medical science and practice,—and that neither expense nor loss of time is incurred by a practitioner in the performance of the duty, we think that this objection entirely fails; and those who urge it, are probably more influenced by the fact that they are ill paid for other public services, than that a pecuniary remuneration could be fairly expected for a trivial service of this kind. If only a shilling were paid as a fee on each occasion, the sum thus required for the mere signing of mortuary certificates would exceed *fifteen thousand pounds* per annum! It is not to be supposed that even this sum could be extracted from the public purse for such a purpose; and it would, in our opinion, be a mark of far greater wisdom in the minority who make this objection, if they would unite to demand an increased scale of remuneration for services now ill paid, rather than attempt to extort payment for the performance of a duty which involves neither labour nor any material loss of time. In the former case, they would be demanding justice, and the voice of the public would go with them: in the latter, they place themselves in the unenviable position of men who are only influenced by mercenary motives. We are satisfied that the demand, from its unreasonableness, will never be conceded; and it is therefore absurd to throw this as an obstruction in the way of the Registrar-General. We trust that in his next Report he will not have to complain of even so many as fifty out of many thousand practitioners in England and Wales, being defaulters in the performance of a work for the common good; but that reflection and better judgment will lead them to join the large majority of their professional brethren, in carrying out the purposes of the act. Should, however, any practitioners be found who are unwilling to co-operate with the Registrar-General in registering the causes of death, they must be prepared to find that the Legislature will probably hereafter adopt the rule suggested in the latter part of the following extract, *i. e.* of ordering a coroner's inquest to be held upon the bodies of those persons, the causes of whose deaths have not been legally assigned by the licensed practitioners who have been in attendance upon them.

We think that we cannot do better than quote the remarks of the Registrar-General on this subject:—

"That it is the duty of the State to require from the medical attendants, and to register, the cause of every individual's death which takes place in the country, appears to me incontestable; and as I have stated, I have found the profession as a body, comprising more than ten thousand qualified medical practitioners, and all the most eminent men in all branches of the profession—physicians, surgeons, and general practitioners, have expressed their readiness to return the causes of death in the best way the present state of medical science, and their means of procuring information, will admit. I have given explicit instructions that no certificate shall be received from persons known to be unqualified, or to have no diploma from either the Halls, Colleges, or recognised Universities; and I have determined not to attempt at present to compel the few medical practitioners who have refused to sign certificates, to return the causes of their patients' deaths; as, although they may have diplomas, it is probable that the information they would be induced to furnish would be of little comparative value, and might mingle errors among the facts spontaneously supplied by enlightened accurate observers. If the Legislature should appoint Health Officers to act with coroners, and to inquire into the causes of the deaths of persons who are not attended medically at all, or are attended in fatal diseases by quacks and unqualified practitioners, it may be thought right to inquire into the deaths of patients attended by men holding diplomas, who refuse to state the causes of death to the best of their ability."

These observations are well worthy of the attention of the few professional men who still refuse to sign the mortuary certificates. We cannot extend our remarks further on this occasion; but there are many other topics of interest in the Report, to which we propose to call the attention of our readers at a future time.

THE ASIATIC CHOLERA IN PERSIA.

According to the *Gazette Médicale*, six Princes and several Princesses of the Court of Persia have been cut off by the Asiatic cholera. The mother of the Prince Royal, and the only daughter of the Schah, had been attacked, but had recovered under the treatment of Dr. Cloquet. Among the victims is the celebrated Mirza,-Aboul-Assan-Khan, minister of foreign affairs,—who was an ambassador to this country in the year 1820. Another minister of the Schah, the Visier of the Prince Royal, and other high functionaries of the Court, have also been cut off by cholera. The disease appears to have been particularly fatal among the upper classes. It was spreading in all directions, and had taken the course of Astrachan and Moscow. It was expected, however, that its progress would be arrested by the cold of winter.

Reviews.

The Complete Surgical Anatomy of the Human Body: in Eighty-seven Drawings, imp. folio. By Richard Quain. Drawn from Nature, and on Stone, by Joseph Maclise, M.R.C.S. London: Taylor and Walton. 1846.

It is not often that we notice works by anticipation; *i. e.* before they are in the hands of the public; but the publication of a new edition of the valuable work before us depends on the plan of the publishers being made known to the profession. In common with our contemporaries, we have had occasion to speak well of this work. The only drawback to its extensive diffusion has been its great price, which, however, scarcely furnished a sufficient compensation for the time, scientific skill, and artistic labour, bestowed upon the plates. From a prospectus before us, we find that the new edition is about to be issued, when the number of subscribers reaches five hundred, at two-thirds of the price originally fixed upon the work. This amounts to but a very small charge for each plate; and, in addition to this, every subscriber will be presented with an octavo volume of Commentaries, forming in itself an elaborate and useful practical treatise. The plates are professedly of "the Arteries;" but the work will constitute a complete system of surgical anatomy. Further notice from us, of a publication which must be so well known to the profession, is scarcely required; but we have thought it advisable to call the attention of our readers to the plan upon which it is proposed to bring out a new edition; and we trust that this notice may thus be the means of giving to a work, so useful to the student and practitioner, a larger circulation than it has hitherto received.

Chemistry and Physics, in relation to Physiology and Pathology. By Baron Justus Liebig, M.D. F.R.S. &c. 8vo. pp. 116. London: Baillière. 1846.

This essay consists of a series of propositions on various chemical, physical, and physiological subjects, strung together without any particular order or arrangement. Some of them suggest important matter for reflection; others partake of a critical character; while a third class are chiefly remarkable for broaching somewhat questionable doctrines. Whatever respect we may entertain for Baron Liebig as a chemist, we cannot say that we are inclined to take him as a guide in reference to physiology and pathology. With a mind completely devoted to chemical research, and a disposition to regard all questions from a chemical *standpunkt*, he appears to us scarcely in character, as a critic of the physiology and pathology of Henle, Valentine, and Schleiden.

With this reservation, and with a disposition to follow the author, regardless of the order or connexion of his subjects, the reader will find much philosophical matter to interest him, and to induce him to examine and test the validity of his own opinions. The nature of the work will be, perhaps, best understood from a few extracts; and first, of

Confusion of Cause and Effect.

"The most common phenomena have been incorporated in the minds of many physiologists as actual capacities—properties—which they have falsely been led to explain by especial reasons different from the others known. Thus the terms *endosmosis* and *exosmosis* have been applied to the return of a state of equilibrium of two fluids differing in their nature, or of two unequally dissolved substances, separated by an animal membrane; and thus we continue to treat names as if they were facts, embracing an explanation of the process, while this phenomenon is nothing more than a filtration, differing so far from other forms that the permeation is dependent not upon pressure, but upon attraction, disposition, or affinity." (p. 10).

Examples of erroneous observations: the supposed influence of the moon upon the formation of dew.

"One of the most familiar illustrations of erroneous observation, is the influence ascribed to the moon in reference to the cold felt in moonlight nights, and to the formation of dew and hoar-frost; while the moon, in these cases, is a mere spectator of their formation.

"In a work in other respects very good, published at Dresden last year, on the influence of the moon upon the earth, the following passage occurs in reference to the

> ***influence of the atmosphere upon evaporation*:—'In the absence of an atmosphere we cannot conceive the existence of water, or any similar fluid, in a liquid form. If our globe were suddenly deprived of air, its rivers and seas must evaporate, and the whole earth would in a short time dry up, as we see exemplified on a small scale by experiments under the air-pump.' Here, as we see, a connexion between the atmosphere and evaporation is presupposed, which does not exist in nature. Without an atmosphere it is true no clouds would be formed, liquid water would not be converted into vesicles of vapour, and aqueous vapour would not rise to so great a height; but the atmosphere has no effect upon evaporation, and an equal quantity of aqueous vapour is produced under the receiver of the air-pump, whether or not the air be exhausted removed?)." (p. 28).**

It was long since proved by Dalton, that a cubic foot of air or vacuum held the same quantity of aqueous vapour at the same temperature, and that the proportion evaporated is wholly irrespective of barometrical pressure,—a fact with which the Dresden philosopher, in compiling his book, does not appear to have been acquainted. The error has a wider range than Liebig has suggested. In some respectable astronomical works it has been laid down as a theorem that our satellite, the moon, has no water, because there is no appearance of an atmosphere or of clouds. Even if the reasons assigned for the entire absence of an atmosphere like our own were satisfactory, which they most assuredly are not, the physical law above stated must clearly shew that it is erroneous, upon this hypothesis, to infer that there is no water upon her surface. On the contrary, it is not at all improbable that many of the dark portions of the moon's surface are really aqueous, the light penetrating the water much more easily than the land.

In speaking of the power of the sun to attract water, Baron Liebig ridicules an hypothesis broached by some naturalists in reference to the effect of solar influence on the quantity of water in mines; but he omits to notice a curious effect, of which we have not yet seen an adequate explanation,—namely, that the globules of water raised by evaporation in the interior of a bottle only partially exposed to light, are invariably deposited on the side nearest to the light; nor do we know that there is any theory to account for camphor, under similar circumstances, fixing itself on the side of a bottle most exposed to light. The truth is, the real power of the sun on natural phenomena is as yet only partially revealed to us.

On one point we most decidedly agree with the author, namely, that—"*Want of correctness in expression is the cause of erroneous conclusions and misunderstandings.*" (p. 86).

We shall only take one illustration of this. If we mistake not, Liebig has himself applied the term "*combustion*" to the phenomena of *respiration*. We are told that the oxygen of the air taken into the lungs serves for the burning of a certain amount of carbon and hydrogen; and such a hold has this doctrine taken among some of his admirers, that food is described as fuel, the lungs are spoken of as a furnace, and the exact amount of heat evolved in a given time is calculated to a decimal fraction, as if the operator were dealing with a weighed quantity of charcoal in a chemical laboratory! We do not object to the theory, so much as to the language in which it is conveyed. On what principle can respiration be considered as synonymous with combustion?—a condition which, according to most chemical authorities, implies a vivid evolution of light and heat as a result of intense chemical combination. The use of such a term, in speaking of the respiratory process, even if employed figuratively, is incorrect, and tends to give rise to the most erroneous conclusions. It might with as much propriety be applied to the rusting of iron, the oxidation of zinc, the decomposition of nitric by sulphurous or hydrochloric acid, or of iodic by oxalic acid. The same bodies may combine under different conditions with or without combustion. Sulphur and copper, in uniting at a high temperature, undergo combustion; but the tarnishing of copper by sulphur at ordinary temperatures cannot have the same term applied to it. By the aid of an ignited substance, or the electric spark, carbon and hydrogen may undergo combustion in uniting with oxygen; but to us there appears to be a decided "want of correctness in expression" in speaking of the "combustion" of these bodies as they are removed from the blood during the act of respiration.

From the remarks which we have made, and the extracts given, our readers will be able to form a judgment of the nature of this work. We think there are few who will not acquire some useful hints from its perusal.

Elements of Chemistry: including the applications of the Science in the Arts. By THOMAS GRAHAM, F.R.S.L. and E., &c. 2d Edition. Part I., pp. 160. London: Baillière. 1846.

WE have great pleasure in announcing the appearance of a second edition of this excellent treatise, which has gained for its author a deservedly high reputation as a chemist, both in this country and on the continent. We have compared the Part before us with the corresponding portion of the first edition, published in 1842, and we find that Professor Graham has spared no pains to bring it up to a level with the present state of chemical science,—the rapidly progressive character of which is now rendering obsolete, works of only a few years' standing. The present Part merely touches the subject, and may be regarded as an introduction to the study of Chemistry. It embraces Heat, Light, Chemical Nomenclature, combining proportions and the atomic theory. From the clear and simple style of the author, the student will have no difficulty in following his explanations of these abstruse subjects; and with regard to the accuracy of the details, we know of no work on Chemistry, which may be more safely trusted.

Among the additions to this Part, we notice Pierre's table of the contraction of liquids from the boiling point,—the temperatures at which the liquefiable gases freeze,—a full account of the interesting discoveries recently made by Mr. Faraday on the liquefaction and solidification of gases*,—sections on the effusion and transpiration of gases, and improved tables of chemical nomenclature, as well as of the specific gravity of gases and vapours. In the first of these tables the author has introduced the five new metals, didymium, lanthanum, niobium, pelopium, and ruthenium; and he has arranged the equivalents on the scale of hydrogen as unity according to the English practice, and of oxygen as 100, according to the continental plan. In reference to this table, it may be as well to remark for the benefit of those who are fond of making frequent changes in pharmaceutical nomenclature, that Professor Graham represents mercury as having an equivalent (Hyd.=1) of 100·07; hence, calomel becomes again, as in the olden time, *sub*chloride of mercury, and the name given to *calomel* in our present Pharmacopœia therefore properly belongs to *corrosive sublimate*. What is an unfortunate pharmaceutist to do, who receives a prescription, "℞ *Hydrargyri Chloridi*, gr. iij.?" Is he to send corrosive sublimate or calomel? He is bound at present to obey the rules of the Pharmacopœia, however they may conflict with those of science; but, nevertheless, it is to be regretted that he should be placed in the difficulty of having to decide a question regarding which there should be no uncertainty whatever.

The Table of the Specific Gravity of Gases and Vapours has been drawn up with great care. It covers seven pages, and comprises all bodies, simple and compound, capable of existing in the gaseous or vaporous state. The specific gravity of each is given on three separate standards,—air, oxygen, and hydrogen, being respectively taken as unity. The equivalent constitution in one volume is represented symbolically in a separate column. Oxygen is here taken as unity, so that the combining proportions of hydrogen, nitrogen, chlorine, and others, are represented by two volumes. The specific gravity of oxygen compared with air is given by the author as 1105·63.

If in this notice we have made no extracts, it is because we believe that the character of the work is so well established as to render it unnecessary. We have not the slightest doubt that when this edition is completed the work will continue to maintain its position as a standard treatise on chemistry. We cannot conclude without observing that this Part is exceedingly well printed. The type is unusually clear and distinct,—a great recommendation to readers.

---

* His researches on this subject appeared in our thirty-sixth volume.

Proceedings of Societies.

MANCHESTER PATHOLOGICAL SOCIETY.

October 2d, 1846.

Aneurism of arch of aorta in process of cure—rupture elsewhere.

DR. WATTS presented an aneurism of the arch of the aorta, which had undergone spontaneous cure some months prior to death.[*] The aneurism was of the true species, as large and orbicular as a medium-sized orange, and originated from the aorta at the anterior margin of the anteria innominata. It impinged in front upon the sternum; posteriorly it passed on the gullet, having pushed the trachea towards the right side. A firm laminated coagulum, of a pale chesnut colour, filled up the cavity of the sac, a space at the mouth, capable of admitting a filbert, only remaining open.

The ascending aorta was greatly dilated; it measured at the widest part, midway between the aortic valves and the arch, four inches in circumference; the dilatation thence gradually lessening terminated at the origin of the left subclavian. The innominata and the vicinous nerves were compressed betwixt the aneurism and the ascending aorta. The internal surface of the dilated vessel was rough and very uneven; and at one point, near the mouth of the aneurism, the coats were of a deep-red colour, thickened, and softened: in the midst of this acutely diseased patch was a rupture admitting the passage of a probe, through which about 12 ounces of blood had escaped into the pericardial sac. The heart itself was most healthy, as also the remaining organs and viscera.

The patient, a hand-loom weaver, a fine-looking man, in his 71st year, had experienced constant heavy crushing pain in the right shoulder for two years and seven months, which, during the last six months, had been most distressingly severe; and from this time he was also afflicted with darting pains, sometimes intolerably agonising, across the upper part of the breast, as also up the right side of the neck to the head. These darting pains had deprived him of sleep at night; so that for full six months he had not enjoyed a night's repose. Ever after the darting pains set in deglutition was attended with soreness, and also with a sensation as if the food would stop opposite the top of the sternum; but within the last three weeks, since the appearance of a small pulsating tumor above the sternal notch, he had had less inconvenience in swallowing. The tumor was tender on pressure, compressible, and vibratory to the feel. During the last fortnight the right sterno-clavicular articulation had become swollen and sore, and the darting pains had extended to the left shoulder up the right side of the neck.

The heart's action and sounds were perfectly correct in the cardiac region, but in the aorta they were much too loud; and the impulse of this vessel was stronger than usual at the upper part of the sternal region, which was dull on percussion. A low-toned, short, hoarse murmur was audible in the situation of the tumor after the patient made any quick exertion; it was more distinct about the right sterno-clavicular articulation than elsewhere; but when he was in a state of perfect quietude there was no murmur. The respiration was equally good in both lungs, the man had no anxiety of breathing, but felt as if the shoulder would burst open on hurried or deep inspiration, or coughing. Such were the facts of the case up to the time of the patient coming under treatment.

Powerful anodyne and sedative medicines were prescribed, leeches were applied to the inflamed articulation, and repose in bed was strictly enjoined.

The medicines quickly gave relief; they at once subdued the pain and induced refreshing sleep. The superficial inflammation disappeared. The effect of the sedatives became gradually more marked, till the pulse was at last reduced to 32 strokes in the minute; it was then increased in force and volume, large, full, steady, and regular. The murmur was at this time very loud, prolonged, and hoarse; and, so long as the heart's action remained slow, the murmur was incessant, and audible under every change of circumstances; notwithstanding the pulsating tumor grew firm to the feel and ceased to vibrate. The medicines were gradually discontinued. The crushing and darting pains never returned, though a slight sensation of weight was still felt in the right shoulder. Convalescence appearing complete the man resumed his work for several weeks, and was thus engaged (about six months after the institution of the treatment), when he suddenly fell back, and died frightfully convulsed in less than half an hour.

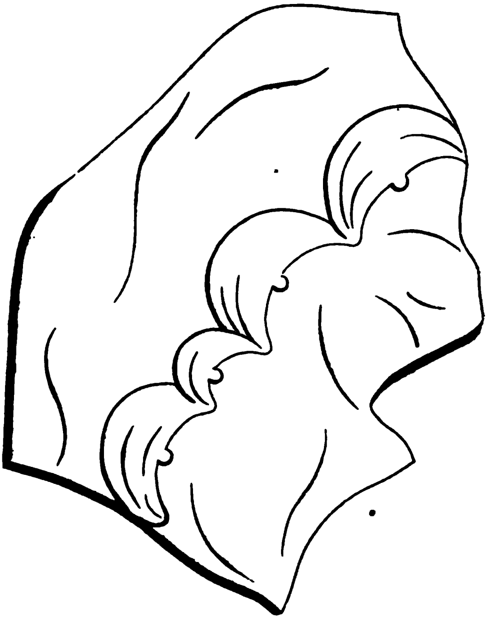
Dr. WATTS observed, there were many interesting features in this case, but called attention exclusively to the good effects produced by the full operation of anodyne sedative medicines. Though it was difficult to fix precisely the amount of relief derived from the remedies, seeing the remission of suffering might have depended in part upon the deposition of coagula in the aneurismal sac, still there was enough evidence to show that the sedative and anodyne operation of the medicines was efficient, prompt, decisive, and well borne; for the man, who had not enjoyed a night of repose for six months, was so effectually relieved by them, that he again slept soundly as in health. This fact appears strongly at variance with the views of some modern practitioners, who seem to think sedatives might be properly discarded in the treatment of aneurism, on the ground of their weakening the powers of life and causing irritable action of the heart. In opposition to such doctrine, the case proves that, if rightly combined and administered with judgment, sedatives may be employed in appropriate cases, without producing the alleged inconveniences. Besides relieving the pain, in this instance, they apparently had another good effect; retarding the circulation when the parts in relation with the aneurism were inflamed, they so opportunely promoted the formation of coagula that the spontaneous cure was all but perfected.

---

[*] When the aneurism is of the true species, which is generally the case with those of the ascending aorta and arch, a cure is scarcely to be anticipated, as the coagula can scarcely be made to form in the sac.—*Hope: On the Diseases of the Heart and Great Vessels*, p. 480, l. 28-31.

Four Pulmonary Semilunar Valves.

Dr. Francis presented the pulmonary artery of a man to which there were four semilunar valves. Each of them was well formed, distinct, and possessed a corpus arantii. Three were equal sized, and but slightly smaller than the ordinary adult valve; the fourth, however, was of scarcely half that breadth, but still perfect and well formed. Their summits all reached the same level, but the smaller valve did not extend far below the centre of the larger ones. They appeared to have been well adapted to close the ostium of the artery, and that without any excess of substance, for there was no appearance of thinning or wasting of the curtains. The heart was in other respects quite normal, and was free from disease. It was taken from a man aged 50, who died of phthisis.

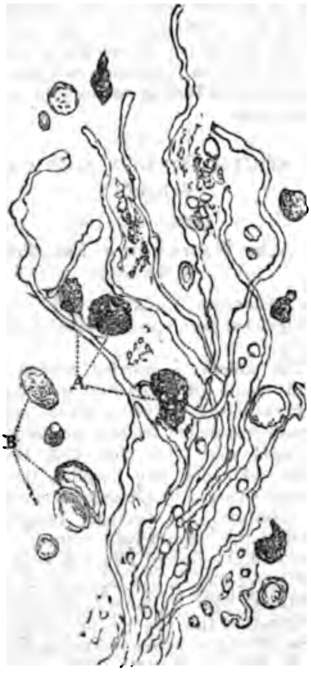


The specimen was exhibited rather as a very rare and curious example of departure from the ordinary state of things, than as possessing much interest in a pathological point of view. How rare such an occurrence really is would appear from the fact, that the exhibiter of the present specimen had only once met with it among upwards of a thousand inspections which he had either made or witnessed; but much more forcibly from an observation of J. F. Meckel, who states (Tab. Anatom. Pathol. Fas. i. Tab. ii.), that so very rarely do the pulmonary arteries deviate from the common type, that, in the great number of corpses which he had examined, two only such instances occurred to him, in one of which there were four, in the other but two valves. Both cases are figured in the work just cited, in addition to two which the author had derived from other sources than his own practice. Meckel speaks of the combination of three equal-sized valves, rather below the usual dimension, with a diminutive fourth valve, as much less frequently met with than some other varieties in the relative sizes of the four valves.

Dr. Francis had not succeeded in meeting with any similar cases recorded in the Englsh literature within his reach. Some further references upon the subject, however, are given by Otto to the pages of Morgagni and Penada.

Paralysis of Gullet; inflammatory Induration of Medulla Oblongata.

Mr. Dumville presented a drawing of the microscopical appearances of the medulla oblongata in a fatal case of dysphagia.



On the most careful examination after death, no disease was discovered in the gullet and parts adjacent, nor in the chest or abdomen. The pons varolii and medulla oblongata, although to the naked view healthy, seemed firmer to the feel than usual, and the olivary bodies were large and prominent; for the rest the brain appeared healthy. On examining the medulla oblongata and olivary bodies with the microscope, a number of inflammation globules were found interspersed amongst the nerve tubes and ganglionic corpuscles, as represented by the woodcut. The patient, a young man æt. 19 years, had been strong, hale, and healthy, until the last twelve months. The first change observed by his friends was an alteration in the natural resonance of the voice. About nine months before death, he complained of pains in the knees and elbows, and on two or three occasions he momentarily lost all power in the upper and lower extremities. Once, when carrying a parcel, his arms for an instant became paralysed, and it dropped; another time, when walking, he momentarily lost the use of the legs, and fell with violence. He never had fits, nor delirium, nor any impairment of mental faculty, but occasionally suffered pain in the forehead. For some months he was observed to eat slowly, and from this time the voice was so altered that he grew barely intelligible without the aid of signs. During the five weeks prior to the fatal event, such was the difficulty of deglutition that he could not swallow anything solid; and for the last fortnight the same impediment was noticed with respect to fluids. There was no pain in the throat. The œsophagus tube was easily introduced, and, though liquid food was readily injected into the stomach, he ultimately died from exhaustion.

The diagnosis in this case, though not free from difficulties, proved correct. The disease was thought to be paralysis of the gullet, resulting from morbid change in the nervous centres; its dependence upon cerebral lesion appearing the more probable since the patient had experienced on several occasions paralytic seizures in the limbs. The case shows the great value of the microscope in the investigation of the morbid anatomy of nervous structures, for without the microscopical examination it would not have been possible, in this instance, to have positively verified the diagnosis, or to have ascertained the precise nature of the lesion.

Dr. Renaud presented the cysts in a case of double ovarian dropsy. The left cyst was quadrilocular; it measured twelve inches in length, and was thirty inches in circumference. The shape was pyriform, owing to impaction of the lower portion in the pelvic cavity. Very extensive and firm adhesions everywhere existed between the tumor and the anterior abdominal walls, and in the pelvis. The left oviduct, which was nine inches long, and pervious, stretched obliquely across the front of the cyst to a little below the concavity of the liver. Following the same directions, and lying within the folds of the broad ligament, were the hypogastric artery and veins, greatly dilated and elongated, measuring as trunk vessels fifteen inches. The tumor was without pedicle, and the blood-vessels communicated with it at that part where it was overlaid by the liver. When enucleated from the enveloping false membrane, the surface of the tumor was seen to be smooth, glossy, and unusually vascular. The uterus was attached posteriorly, and the bladder was situate in front. Both these viscera had been elongated, flattened, and elevated, by the increasing dimensions of the ovarian cyst. The uterus measured 5½ inches in length, 3½ in breadth, and the cervix was two inches long. The right ovarium was closely adherent to the left cyst by false membrane, and was affected with a like disease. Its entire length, including two small cysts, was three inches. The part of the ovary yet remaining was flabby, enlarged, and flattened, and when cut open presented many of the deep black markings so commonly seen in these glands during the child-bearing period of life. A pendulous and malignant growth sprung from the larger of these cysts by a pedicle, and measured 1½ inches in length.

The woman was 27 years of age, and unmarried. Her menstruation had always been regular, though for the last few months of her life this function was performed with pain, and leucorrhœa existed in the intervals. Two years ago, a swelling was observed in the lower belly. Pain was first felt in the right iliac region eighteen months ago. The tumor had gradually and progressively increased for the last twelve months, and during the whole of this time her health was declining. For six months the passage of urine had been attended with pain and increasing difficulty, the recumbent position being that most favourable to its flow. The lower limbs were greatly œdematous. In addition to these symptoms there was also aching in the loins, and occasionally shooting pains round the iliac crests.

The patient, when first seen by Dr. Renaud, was in an exceedingly low state, and rapidly sinking: after three days she died.

The absence of pedicle, and the position of the feeding vessels, are alike circumstances deserving attention. It would appear that the tumor had been originally a diseased vesicle of Graaf; that the peritoneum had been pushed before it proportionally to its growth; and that the entire of the adhesions had taken place between the peritoneal envelope of the tumor and that of the abdominal parietes: hence the practicability of enucleating the morbid growth. The œdema of the lower limbs, and the difficulty of voiding urine, are both adequately explained by the mechanical obliteration of the pelvic cavity. The character of the disease in the right ovary confirms the opinion of Dr. Hodgkin, that double dropsies are generally malignant.

The practical inference derivable from these details is the unfitness of the tumor in question for any extirpative operation; for, without taking into consideration the firm adhesions, the want of pedicle, the anomalous vascular connexions, and the close adhesion of the uterus and bladder to the main cyst, the fact of the opposite ovarium being also involved in like morbid processes was a circumstance that must have eluded the most delicately made diagnosis; and although the singular combination of impediments in this case would not argue aught, perhaps, against the propriety of the operation in general, yet these hindrances seem well calculated to show how such an operation may be beset with difficulties such as the most skilful can neither avert nor yet combat. Dr. Renaud was of opinion that every faithfully recorded case of this disease was of especial value at the present time, seeing the profession were yet divided in opinion about the desirability or otherwise of the excision operation, and that these scruples could best be removed by accumulating facts.

SOUTH LONDON MEDICAL SOCIETY.

October 29th, 1846.

Charles Waterworth, Esq. President, in the Chair.

Mr. Edward Cock related a case of strangulated hernia, complicated with pregnancy.

The patient, a married woman, in the third month of pregnancy with her first child, had been for two years the subject of a small irreducible femoral omental hernia on right side. On Oct. 23d, two days before admission into hospital, the tumor became enlarged by the descent of a portion of intestine: the ordinary symptoms of strangulation immediately ensued. An urgent wish to prevent removal from home, and an operation, had led to much manual treatment both by herself and attendants; the result of this was that the whole of the inguinal region above and below Poupart's ligament was swollen, ecchymosed, and slightly vesicated, and exquisitely tender to the touch: the tissues beneath infiltrated with fluid, the result of cellular inflammation. The hernial tumor could be but indistinctly felt, on account of the surrounding swelling. The ill success of the means tried, with the present condition of patient, rendered it best to operate immediately. After division of the swollen tissues a director was passed between the neck of sac and stricture, which was divided, and the knuckle of intestine returned without the slightest difficulty: a small piece of omentum still retained within the sac was left, as she stated she had been the subject of irreducible omental hernia. The operation was perfectly easy, without obscurity, and was borne with great fortitude; and as the sac was not opened, neither its contents nor the peritoneum were injured. Immediate relief of the symptoms followed, but within a few hours pains of a parturient character, with vaginal discharge of blood, came on, but after an opiate enema, ordered by Dr. Lever, these subsided. The next day, Oct. 26th, the abdomen was more swollen; there was nausea with eructations; small frequent pulse, and evidently peritonitis; acute pain of circumscribed space existed to the left of the umbilicus. Forty leeches, fomentations, with calomel and opium every two hours, were ordered, and relieved the local pain; but as the tendency to nausea increased, an opium enema was substituted for the pills. On the following day there was no material alteration, and the local pain returning was again relieved by leeching: the sickness abated, but no relief from bowels. Continuing to improve, her bowels were freely relieved by castor oil, and on the 30th she was pronounced out of danger. In the course of the following day miscarriage took place; much blood was lost, and placenta retained. From this time she sunk, and died the following night, being the eighth day after the operation. On inspection of abdomen, traces of peritonitis were found, and a minute quantity of turbid serum in the lower part of that cavity. Kidneys unhealthy. The hernial sac was empty; the small knuckle of ilium which had been contained in it was nearly obscured by the yet soft adhesions it had contracted with the adjoining intestins. On separating these, a gangrenous patch about the size of a shilling was seen on the intestine: this patch was circumscribed, and although retaining its position, was completely isolated by a distinct circle of demarcation from the rest of the gut, which had been in the sac, and had completely regained its normal state. The spot was quite concealed by the adhesions of adjoining intestines, which, if the slough had fallen away, would have preserved the integrity of the canal.

The author drew attention to two practical points in the above case: firstly, the combination of hernia with pregnancy, and the influence one may exert on the other as regards symptoms, result, or treatment. Secondly, the power exerted by nature to remedy injuries of the intestine, whether arising from sudden violence, or gradual and partial loss of vitality from strangulation. The occurrence of strangulated hernia during pregnancy may be considered especially disastrous to the patient, as well as perplexing to the surgeon. The nature of the complaint, and of the remedial measures necessary for its removal, have an inevitable tendency to bring on a miscarriage; which, occurring either previously or subsequently to the operation, under present circumstances, must immeasurably increase the danger: in fast, place the patient in an almost hopeless condition. It has been stated by a surgeon of eminence that in his experience strangulated hernia during pregnancy had been so uniformly disastrous in its results as to induce him to consider the combination of the two conditions necessarily fatal—an opinion which the author did not admit as established. The chief danger in these cases is miscarriage, accompanied by loss of blood, and expenditure of vital power, at a period when the patient is labouring under the enfeebling effects of a double shock; viz. the effects of strangulation, together with the remedies employed to effect reduction, and a severe operation after those means have been found inefficient. Is the abortion caused by the simple operation, or by the palliative means employed up to the last moment to reduce the hernia? The complication alluded to presents one of those cases in which delay is dangerous, and the author recommended an early operation, conceiving that the manipulations and applications for the reduction are far more likely to induce peritonitis or abortion than the operation.

Dr. Lever, in answer to Dr. Munk, stated that the quantity of blood lost in the case mentioned was not large for ordinary cases, but was so as regarded her peculiar state. The placenta was retained, but the patient being in a dying state, he did not feel justified in removing it.

Mr. Benjamin Travers considered the above case embraced many points, and tested the truth of principles. There were two actions going on in the system, and one would give way to the other. He had lately a case with similar symptoms, but in which pregnancy was not suspected. The operation for strangulated hernia was performed, and the patient went on well up to the eighth day after, when she was seized with cramp and acute radiating pain in abdomen, not in region of uterus, accompanied with vomiting, quick sharp pulse, and dry tongue. Leeches, calomel, and opium, were ordered;

she, however, sunk, and died on the eleventh day, having had a sanguineous discharge from the vagina. After death, a small fœtus was found to have been expelled. On examining the body, the fimbriated extremity of fallopian tube was still embracing the ovary; inflammation had, as it were, been arrested; a little lymph was above the surfaces of bowel, gluing it to the wound; the peritoneum could hardly be called inflamed, but was in an ecchymosed state; intestines softened, but not sloughy. He did not consider a woman under such circumstances must die, but that chances were much against her; and cited two cases published by Mr. Travers, sen., of similar combination: in the one, death, but in the other, recovery, followed the operation. He did not consider it necessary the operation should produce abortion.

Mr. Cock, in answer to Mr. Robinsion, stated that abortion did not follow in successful cases; neither *per se* caused death; but both combined do so. Thinks the cause of death may be the loss of blood in such state of system.

Mr. Adams considered that in cases of pregnancy with strangulated hernia we should not have recourse to the usual violent measures to obtain reduction, but proceed to operate, which would then give a better chance of success. In Mr. Cock's case there was a powerful reparatory action necessary to repair the gangrenous spot. Nature could not sustain the two calls upon her, and the patient died from the abortion, apparently, but remotely from the hernia and operation. In Mr. Travers' case also the condition of the intestine required nature's powers, which failed to heal it. The same thing occurs in severe fractures during pregnancy, where, during the process of union, miscarriage often occurs.

Mr. B. Travers remarked, that there were often no efforts made to repair a fracture during pregnancy; but after delivery union commenced.

Mr. Cock, in answer to Mr. Searle, replied that his patient had as much nourishment as she could take: beef-tea on the day of operation, arrow-root, and, lastly, brandy and soda-water.

Dr. Lever, in confirmation of Messrs. Adams and Travers' views, remarked, that in cases of severe illness, as fever and exanthems, during pregnancy, miscarriage did not take place during the progress of the disease, but during the natural efforts to cure. He did not remove the placenta in the narrated case, fearing the necessary manipulation would increase the shock, and cause an earlier death.

Mr. Crisp considered it right to remove the placenta under any circumstances, and related a case of miscarriage in the fourth month, where the placenta was retained by means of a hooked piece of wire, as noticed in "Dewees' Midwifery." He was able to remove it piecemeal, and did not think the uterus need be injured.

Dr. Lever remarked, that in Mr. Crisp's case it was four days after the abortion, and the placenta would be partly detached and putrescent, and more easily removed than just after delivery. The placenta was attached firmer in the earlier than the latter months of pregnancy.

Mr. Crisp considered it better to remove it; and thought that after abortion the placenta was not really adherent.

Dr. Lever thought that where it did not follow the fœtus it was probably adherent: a plug, &c. might be had recourse to. In answer to Mr. Harris, Dr. L. stated that the hæmorrhage occurred before the expulsion of the fœtus.

Mr. Crisp alluded to a case of popliteal aneurism in Edinburgh, where the operation had been objected to; the aneurism burst, and the patient died. He thought half the operations during pregnancy got well, and that there was not so much to dread as some supposed.

Mr. Cock remarked that, although many cases got well, many died. He was not aware of the ratio.

Mr. Adams would regard the existence of pregnancy in rather a favourable view, as it would induce an earlier resort to the operation, and, therefore, greater probability of success.

Thanks were then voted to Mr. Cock, and the Society adjourned.

At the next meeting Dr. Silvester will read a paper on "Venous Bruit."

MEDICAL SOCIETY OF LONDON.

Monday, Nov. 2.

Mr. Dendy, President.

Opium in Inflammation.

Mr. Hird, in allusion to the discussion at the last meeting, said that he had since heard of several cases of ruptured bladder, all of which proved fatal. He mentioned a case in which there was an effort of nature to circumscribe the fluid which had escaped from the bladder, but unsuccessfully.

Dr. Clutterbuck made some general remarks on the treatment of inflammation by opium, and expressed his opinion that, instead of being the "sheet anchor" of the practitioner in cases similar to the present, it excited any thing but a salutary influence on the patient. He questioned if calomel was of any use in inflammatory diseases.

Mr. Dendy believed that Mr. Hilton had

recommended and employed opium in the cases he had detailed, more with the view of arresting the secretory power of the kidney than with the expectation of reducing inflammation.

Dr. **Clutterbuck** thought it was by no means proved that opium had any influence in lessening the secreting power of the kidney.

Mr. **Hird** believed that opium was given in cases of ruptured bladder with the same intention that it was administered in ulceration of the intestines—viz., to act as a mechanical agent, and by checking the secretion of urine.

Several members expressed opinions in reference to the influence of opium on the kidneys, and, also, as to the terms which had been employed in regard to the case and its treatment.

Dr. **Frederick Bird** regarded the use of large doses of opium, and an elevated temperature of the room, to be the best safeguards against the occurrence of inflammation of the peritoneum in those formidable cases in which he had so successfully removed ovarian tumors.

Mr. **Bishop** remarked that opium acted as a charm in injuries, by allaying nervous irritation, which in itself was often sufficient to destroy life. He regarded the subduction of this irritation to be the chief value of opium as an agent in the treatment of inflammatory disease.

Influence of Lactation on the Health of Infants.

Mr. **Dendy** related a case of a lady who lost two children successively, at the respective ages of five and six months, without any previous disease or evident cause. A wet nurse was obtained for the third, which lived and thrived. Did the milk of the mother, who was a strong and healthy woman, exert any influence in the production of the fatal result?

WESTMINSTER MEDICAL SOCIETY.

Saturday, Nov. 7.

Dr. Sayer, President.

The Society held its first meeting of the session this evening, at the rooms of the Ethnological Society, 27, Sackville Street. The attendance of members was numerous, and the very greatly increased comfort and accommodation offered at the new place of meeting gave great satisfaction to the members present.

Dr. **Snow** read a paper on

Alkalescent Urine, and Phosphatic Urinary Calculi.

He said, that when the bladder remained constantly full, as in paralysis of that organ, the urine was known to become alkalescent from decomposition. He had met with a case of incontinence of urine four years ago, in which the whole of the urine became highly ammoniacal, from about half an ounce remaining constantly in the bladder; and he afterwards performed experiments to ascertain if a still smaller quantity remaining unvoided, might not have the same effect. Newly-voided urine was kept at the temperature of 100 degrees, dropping from one vessel into another about the rate at which it enters the bladder; the glass vessels were emptied every six or eight hours; about thirty drops, however, always being left in the lower one, whilst the upper one, after being washed out, was filled again with newly-voided urine. It was found that the urine in the lower vessel became strongly alkalescent, and remained so as long as the experiment was continued, whilst in the upper one it was always fresh. He considered that these experiments would assist to explain a number of circumstances connected with phosphatic deposits and calculi, and would suggest an important improvement in the treatment of a numerous class of cases. With a calculus, or any foreign body in the bladder, it was impossible that it could be completely emptied of urine, and even the urine imprisoned in the pores of a calculus would be enough to cause decomposition in many cases; accordingly it was found, that if a foreign body found access into the bladder, it became nearly always covered with phosphates, and every kind of vesical calculus was liable to become encrusted with them; whilst they, on the other hand, scarcely ever became covered by any other deposit. It was believed by the best authorities, that foreign bodies caused chronic inflammation of the mucous membrane of the bladder, when it poured out alkaline mucus which decomposed the urine. This might be true in some instances; but a pea, or a bit of fibrine, indeed the most inoffensive substance, was certain to become covered with the earthy phosphates. When the urine became ammoniacal from the decomposition of the urea, the ammonia, besides throwing down the triple phosphate from the urine itself, produced great irritation of the mucous membrane of the bladder, and caused it to pour out quantities of phosphate of lime mixed with mucus.

Patients suffering from injuries and diseases of the spine were well known to be subject to alkalescent urine, and, indeed, often died of diseases of the bladder and kidneys; he enumerated the various explanations which have been given of this, and offered the following: that the muscular coat of the bladder was, like the other voluntary muscles, subject to partial as well as complete loss o power; and that when weakened by an affection of the spine, it might be able to void the urine, but not to contract in that vigorous and perfect manner necessary to expel the last drop of urine; more or less would be left behind each time, and this would cause decomposition, which, by its continuance, would irritate and cause disease of the bladder; and that the decomposition, in course of time, might be propagated up the ureters, and cause phosphatic deposits in the pelvis of the kidney. He thought that the debility of extreme old age, and states of great nervous irritability and depression, caused alkalescent urine, generally, by withholding the power from the bladder to empty itself completely; and that the phosphatic diathesis, in the proper sense of the term,—viz., the secretion of the phosphates in excess by the kidneys, was extremely rare.

He recommended injecting the bladder, in these cases, every day, or every other day, with warm water, to wash it well out, and thus preserve its mucous membrane and the urine from disease, until time and other remedies might fully restore the impaired function of the muscular coat of the bladder, or remove whatever prevented its being duly emptied. He considered this practice would greatly improve our treatment of stone in the bladder, by enabling us to keep the urine in a healthy condition; healthy urine, according to Dr. Prout, being the best solvent of all kinds of calculi we could hope to possess.

The case of incontinence of urine alluded to at the commencement, occurred in a female after a very tedious labour. He (Dr. Snow) was made aware of the complaint between two and three weeks after the labour, as she then had ceased to pass urine in the usual manner; the urine was highly ammoniacal, and quantities of phosphate of lime mixed with mucus, like soft mortar, came away with it; the genital organs were excoriated. There was an incrustation of phosphate of lime around the or uteri and upper part of the vagina, he considered, from the ammoniacal urine irritating the mucous membrane. There was no fistulous opening; the incontinence of urine appeared to depend on a morbid adhesion of the cervix uteri to the anterior wall of the vagina, and the patient gradually recovered from it in the course of a few months. On being called to the patient, and passing a catheter, he found that about half an ounce of urine was always present. On washing the bladder well out, the urine which flowed the rest of the day was neutral to test-paper, although, just before, the excretion had been so much decomposed. By injecting the bladder about every alternate day, for several weeks, the urine was prevented from ever getting into the same alkalescent state. Other treatment was also used.

Mr. **Hancock** considered that Dr. Snow had not sufficiently distinguished between the triple phosphates, which he (Mr. Hancock) considered were secreted by the kidneys, and phosphate of lime, which was secreted by the mucous membrane of the bladder when irritated by a calculus, or any foreign body. A uric acid, or other calculus, did not become covered with triple phosphate unless alkalies were given as a remedy, which rendered the urine alkaline; but it might be coated with phosphate of lime, from its irritating the bladder. He was of opinion that the alkaline urine in injuries of the spine depended on the altered secretion of the kidney, and that it ceased as the patient regained his strength. He had had a patient in the hospital with an injury of the spine, in whom the urine was alkaline; he partly recovered, and it became acid; on his relapsing, it became alkaline again, and so continued till his death, and triple phosphate was found in the pelvis of his kidneys: that patient's bladder was injected, but it did not render his urine acid.

Dr. **Frederick Bird** thought that, in the case related, there had been a fistulous opening between the bladder and vagina, and that it had become cured by the morbid adhesion of the cervix uteri.

Dr. Sayer mentioned the case of a lady who died of mollities ossium, becoming deplorably deformed; her illness commenced after a confinement, three years before her death, and was accompanied by alkalescent urine, and a copious deposition of phosphates.

Dr. **Snow** thought that the irritation of alkalescent urine in the bladder might cause such a secretion of phosphate of lime as should lead to softening of the bones; he fancied, that the pelvis of the patient whose case he had related, had altered its form, on account of the phosphate of lime secreted before the treatment began.

PATHOLOGICAL SOCIETY OF LONDON.

Monday, November 2nd.

Dr. J. C. B. Williams, President.

Extra-uterine Fœtation.

Dr. **Oldham** read the case of a female, aged 41, who was pregnant, and expected to be confined in June 1845, at which time a gush of blood from the womb, with some pain, took place, but without any further sign of labour. The breasts became distended with milk. Ergot of rye, galvanism, and some attempts at artificial dilatation, were in vain had recourse to, to excite the paralysed uterus. The fœtus decomposed, and a great many of its bones were removed through the os uteri. The patient died three months after the time she had missed her labour. A preparation of the parts was exhibited. The uterus was contracted and bent back; the anterior wall of the body of the womb was almost entirely absorbed; and the remainder of the fœtal bones, closely packed into an ovoid mass, was found in a cyst, bounded in front by the abdominal walls and urinary bladder; above, by omentum and small intestine, held together by false membrane; and behind and below by the posterior wall of the womb, and the cervix and os uteri. The bladder was thinning at one part, as though some of the fœtal bones would have passed through it. The question was asked—What was the primary lesion which had paralysed the muscular power of the womb, and had left it, in relation to the fœtus it contained, in the same state as an extra-uterine cyst.

Dr. Bentley exhibited to the Society a child, aged 9, who had been the subject of

Cancrum Oris,

supervening upon measles. The contraction of the cicatrix was so great that the middle finger only could be introduced into the mouth. He remarked that the constriction was becoming every day more and more evident. He had no doubt, however, that the deformity could be relieved by a surgical operation, but had declined suggesting it to the parents of the child, owing to disease in the upper maxillary bones and nasal septum not having entirely subsided. Dr. Bentley stated that he would take another opportunity of bringing under the consideration of the members the result of the operation, and offer some remarks on the pathology of the disease.

Mr. Prescott Hewett presented two preparations of

Large Fibrous Polypus of the Small Intestine.

The preparation first exhibited was presented to the museum of St. George's Hospital by Dr. Ogier Ward, with notes of the case. The patient, a woman, aged 34, applied to the Kensington Dispensary on account of pain in the right side, with constipation, which was relieved by aperient medicine; but two days after she was seized with vomiting and constipation, which continued, with little interruption, up to the seventh day after the setting in of the urgent symptoms, when she died. The matter vomited was first of a green colour, but subsequently appeared like thin gruel. There was no pain in any part of the abdomen. The body was examined twenty hours after death. The peritonœum did not appear to have been inflamed. At about three feet from the cæcum there was extensive invagination of the small intestine; the invaginated part, which was easily drawn out, presented no marks of inflammation on its outer surface; but its mucous membrane was dull and grey, having a gangrenous odour. Immediately below the invaginated portion of intestine was a tumor, of the size and shape of a pear, connected to the inner surface of the gut by a long pedicle. This tumor was dark and livid, and supplied with several vessels, its texture being remarkably firm, and presented a well-marked fibrous appearance. In this case the invagination of the gut was not connected with the polypus, which was situate below the invaginated portions. The second preparation consisted of a portion of the small intestine, in which there was a permanent invagination of the gut, connected with the polypus. The preparation was taken from a man, aged 46, admitted into St. George's Hospital, under the care of Dr. Nairne, with symptoms of peritonitis, accompanied with diarrhœa, profuse perspirations, sleeplessness, and emaciation. The diarrhœa, which had existed for some months, was preceded by obstinate constipation of eight days standing. The urgent symptoms were slightly relieved, but soon returned, and the patient died on the 17th day after admission.

An extensive effusion of puriform fluid was found in the cavity of the peritonœum, fœtid, and apparently mixed with fæculent matter. The peritonœum covering the intestines was in many places very much thickened, and of an ash-grey colour. The small intestines were much distended, especially at the upper part; and the omentum, thickened and contracted, was, together with a convolution of the small intestine, firmly united by a broad band to the parietal peritonœum of the left lumbar region. After detaching the adhesions, an invagination was found in this part of the small intestine, which was two feet from the cæcum. Above the invagination there was an enormous dilatation of the intestine, and below it there was slight contraction. On laying open the intestine, a large polypus was found connected with the invaginated portion, from which it depended into the cavity of the gut. It was pyriform, two inches and three quarters long, and about one inch and a half wide at its broadest part: the pedicle by which it was attached to the gut was of the size of the middle finger, and an inch and a half long. The surface of the polypus was quite smooth; the texture of it was livid and quite firm, and presented the appearance of fibrous tissue, and was plentifully supplied with blood-vessels. The peritonœal surfaces of the invaginated portions of the gut had become firmly united, and this portion of the intestine was dark and livid. The intestine immediately above presented, towards its mucous surface, a broad ulceration, occupying two-thirds of its diameter. Here the gut easily gave way when pulled upon, and allowed the contents to escape before it was laid open. Examined by the microscope, the structure of the polypus proved to be decidedly of a fibrous nature.

Mr. P. Hewett remarked that the last case presented a point of very great interest. He alluded to the existence of the broad ulceration in that part of the gut which was situated immediately above the invagination —an ulceration by which the invaginated portion of the gut, with the polypus, might have been separated and passed by stool.

The two preparations are preserved in the museum of St. George's Hospital.

Clot in the Pons Varolii.

Mr. Prescott Hewett, in the absence of Sir Alexander Morison, exhibited to the Society a specimen of a small clot situated nearly in the centre of the pons varolii, rather more to the right side than to the left. It was taken from the brain of a lunatic, who was in his usual health and taking out-door exercise on Friday. On Saturday he was seized with apoplexy, followed by paralysis of both sides, and died on Sunday morning. The inspection was made twenty-four hours after death, and the only evidence of disease detected was this clot, about the size of a pea. The arteries of the brain appeared to be healthy.

Diseased Heart.

Dr. C. J. B. Williams exhibited a specimen of enlarged heart, with regurgitant and obstructive disease of the aortic valves, and double and sacculated aneurisms of the aorta. The patient, a gentleman, aged fifty-nine, came under Dr. Williams's observation four years ago, and then exhibited the usual characteristic signs of the lesion of the aortic valves; and from the dry hoarse grating, with strong pulse in the carotids, and a slight degree of dulness on percussion to the right of the upper part of the sternum, the diagnosis of dilatation of the ascending aorta was also made. When Dr. Williams was next consulted, twelve months after, he found, in addition to the former signs, circumscribed, visible, and palpable pulsation, with dull *stroke sound* at the right margin of the sternum, in the first intercostal space, indicating aneurism of the arch of the aorta. At this period there was much severe pain in the right front of the chest and shoulder, with occasional attacks of spasmodic asthma. During the next two years the case presented little change further than what arose from the occasional accession of severe paroxysms of pain and dyspnœa, with intervals of comparative ease, in which the general health was wonderfully sustained; and although the action of the heart was always so strong and violent as to shake the whole body, the patient generally experienced no discomfort. In the course of last spring, however, the attacks of difficult breathing became more frequent; a cough sometimes occurred, with a peculiar ringing note, and the breath and strength were more permanently impaired. It was now found that the pulsation to the right of the sternum was much reduced in strength, whilst that of the heart had increased, the other signs remaining as before. A loud ringing note was given to the tracheal breath-sound, which caused it to be heard far down in the chest; but further, the breathing was so loudly tubular in both interscapular spaces as to give rise to a suspicion of the existence of consolidation of the lung, which was not, however, confirmed by other signs or symptoms. The decline in the general health led to the expectation that the kidneys were beginning to become diseased, and, on examination, the urine was found to be albuminous. This worsted much the prognosis, and whereas before, from the extraordinary manner in which nature had balanced defective mechanism by augmented strength, it seemed possible that the patient might live for years, it was now (April) predicted that he would probably not survive six months. He died suddenly at the end of October, after increasing symptoms of dyspnœa and anasarca. The heart was adherent to the pericardium by old loose membranes. The apex reached to the eighth rib at the side, and the confines of the right ventricle extended to the ensiform cartilage, and the margins of the cartilages of the left ribs. This enlargement was mainly due to the great size of the left ventricle, the cavity of which was about thrice its natural size, its wall varying from three-quarters to an inch in thickness, except at the apex, where it did not exceed one-eighth of an inch. The weight of the heart was about twenty-eight ounces. The valves were healthy, except those of the aorta, all of which were thickened, and the edges of two retroverted, so as to permit free regurgitation, with a large oval perforation at the margin of one, which must also have permitted a reflux of blood. The aorta, from a little above its valves to the termination of the arch, was dilated into a large cavity, varying from two to three inches in diameter, wlth two diverticular sacs projecting from it; one anteriorly of the size of a pullet's egg, in contact with, and firmly adherent to, the sternum and first right intercostal space, the adherent part being lined with a firm, thick, fibrinous layer; the other sac projected from the upper part of the arch, between the innominata (the orifice of which was also dilated) and the left carotid, to the extent of two inches in front of the trachea, which it compressed so much as to reduce its antero-posterior diameter to three lines: this sac contained no coagulum, and communicated with the arch by an opening admitting two fingers. The aorta, at the commencement of its descending portion, retained its natural dimensions, but just below it became again dilated into an oval cavity, four and a half inches in circumference at its largest part. The coats of both these dilated portions of the aorta were much thickened with irregular atheromatous deposit, interspersed with osseous laminæ and spicula. Some of the opaque atheromatous matter taken from underneath the lining membrane of the aorta exhibited under the microscope numerous oil globules, with some granular organic matter. The two diverticular pouches presented none of these atheromatous or osseous patches, but consisted of the triple arterial tissue, distended in the manner of true aneurism. The kidneys were enlarged to nearly double their natural size, and exhibited the incipient stage of granular degeneration. The only other morbid condition found in the body was several encysted plastery tubercles, surrounded by contracted tissue at the apex of the right lung, and a puckered cicatrix without contents at the apex of the left lung.

Dr. Williams remarked, that the case afforded a striking example how long life could be sustained, and at times enjoyed, with a considerable amount of comfort, in spite of the existence of an enormous extent of disease altering the mechanism of the centres of circulation. It appears that, in such cases, a balance is maintained by the augmented thickness and strength of the heart counteracting the defective structure, whilst the aneurismal dilatations, although of themselves causing disturbance and danger, act as buffers to reduce the excessive force of the heart in its immediate vicinity, whilst the arterial walls are partially fortified by fibrinous and osseous deposit. As usual in such cases, the vital processes were pretty fairly maintained, in spite of severe temporary disturbance; until the kidneys began to take on disease, then the decline of health was more rapid and uniform. The remarkably local tubular sounds heard to the left as well as to the right of the dorsal spine, were explained by the dilated descending aorta having pushed aside the lung. This dilatation was the only point in the case not diagnosticated before death.

Dr. Williams also exhibited the kidneys of a man who had been the subject of a very serious and fatal form of albuminuria, in which the urine became almost solid by heat, and there was a continual tendency to a peculiar ochreous diarrhœa. The kidneys were large, weighing eleven ounces each; the cortical substance was of a uniform pale buff colour, devoid of granular irregularities, and exhibiting under the microscope an accumulation of large granular cells, with an unusual predominance of oil globules. Dr. Williams considered this to be a rather uncommon variety of Bright's disease, unattended with contraction, on account of the predominance of fatty matter. He took occasion to congratulate the Society on having to preside, on this occasion, one so highly distinguished in pathological science, and whose discovery of this class of affections of the kidney equal in importance any recorded in the annals of medicine.

Dr. Herbert Davies exhibited a specimen of

Communicating Ulcer between the Stomach and Colon, accompanied with a Drawing by Mr. Gowland.

The ulcer, which was of the size of a sixpence, was situated at the lower part of the large extremity of the stomach, about an inch and a half from its left border. The margins were perfectly smooth, and very intimately connected with the circumference of a corresponding ulcer in the transverse colon, so as to form a common opening. The colon, instead of pursuing its normal course, was bent at an acute angle, the angle corresponding to the site of the ulcer. The mucous membrane of the posterior wall of the gut protruded into the ulcerated opening, so as to form a kind of valve, which divided it into a right and left portion. The cicatrix of another ulcer existed an inch outside, and above this, immediately over the spleen. The patient was 54, and had been under the care of Dr. Spurgin and Mr. Saner. Prior to June 1844 he appears to have suffered from more or less severe symptoms of dyspepsia. In June 1844 he was seized with fæcal vomiting, the fæces being partially solid, and not distinguishable from those passed in the ordinary way. The attacks of vomiting returned at periods of various length, sometimes not appearing for months. The bowels during this time were easily acted on by purgatives and injections, from which latter the greater relief was obtained. When the bowels were at all constipated the fæcal vomiting returned. He suffered but slight pain, took little food, and was able to pursue his ordinary occupations till within three months of his death; took very little medicine, an opiate occasionally, and gradually, after two years and a quarter from the first attack of fæcal vomiting, died exhausted. Dr. Davies remarked, that Abercrombie related a similar case, the difference being, that his patient died in three months, and previous to death vomited blood. The lesion was similar, but more extensive. The specimen exhibited by Dr. Davies is in the London Hospital museum.

Mr. **Busk** exhibited a specimen of a

Peculiar Form of Granular Kidney.

The kidney weighed eight ounces, the surface of a claret tint, and largely granulated, the texture presenting a peculiar mottled appearance, particularly evident at the outer part. It was taken from a boy, æt. 19 years, who was, to all appearance, in perfect health four or five days before he died. The symptoms preceding death were, entire suppression of urine, hæmorrhages from the nose and bowels, and lastly, coma; there was no dropsy. Examined by the microscope, the kidney presented in its tubes detached epithelium, but no oily or albuminous matter; the urine was not examined.

Mr. **Crisp** exhibited a specimen of

Rupture of the Left Ventricle of the Heart.

The patient, æt. 73, had been ill six weeks, when he was suddenly seized, about 12 at noon, with pain in the region of the heart, which was attributed to indigestion; a large quantity of flatus was expelled from the stomach. At half-past 4 he vomited some undigested matter. One hour afterwards he said he was freer from pain, but felt a curious sensation in the cardiac region which he could not describe. Five minutes afterwards he was found dead.

Inspection, eighteen hours after death.—Body muscular, depending parts of a livid hue. On opening the pericardium, a quantity of bloody serum escaped; this cavity contained a large quantity of coagulated blood, which was found to have escaped from a small rupture at the posterior part of the ventricle, about one inch from the apex. The chordæ tendineæ were also ruptured; the walls of the ventricle at the injured part did not appear thinner than natural; but intermixed with the muscular fibres was a white, fatty, adipocerous-looking matter; the valves healthy; the left ventricle hypertrophied, one-third thicker than usual; the lungs healthy. Mr. Crisp remarked, that spontaneous rupture of the parietes of the heart was of rare occurrence, and wished to direct attention to the altered condition of the muscular structure. He was induced to think, from the examination of a few specimens of spontaneous rupture of the left ventricle, that this kind of degeneration was generally present. He considered another interesting feature in the case was the time that elapsed between the commencement of the rupture and the patient's death, and thought it probable that the chordæ tendineæ first gave way, and that the aperture in the ventricle was subsequently formed.

Mr. Crisp also exhibited a specimen of

Omental Hernia,

from a female æt. 84, who had suffered from symptoms of strangulated femoral hernia for ten days before death, the rupture having existed but a few months. The vomiting was stercoraceous on the fourth day, and she died from gradual exhaustion, the friends of the patient having resolutely opposed the operation.

In the inspection, twenty-four hours after death, the convex portion of the stomach was seen within half an inch of the pubis, being dragged down by the omentum, which, in passing over the small intestines to enter the hernial sac, appeared slightly to constrict a portion of the ilium. The hernial sac was filled with omentum, so begirt by the neck of the former that it could not be returned. No trace of inflammation in the peritonœal cavity. Gall-bladder small, and contracted upon two biliary calculi; its duct impervious. Cysts in the right kidney filled with sero-purulent fluid.

Mr. Crisp was inclined to believe that the altered position of the stomach was the chief cause of death.

Correspondence.

ON THE INFLUENCE OF VACCINATION IN DIMINISHING THE MORTALITY FROM SMALL-POX.

Sir,—Much has recently been said respecting the frequency and fatality of small-pox, at the same time that doubts were often expressed as to the efficacy of vaccination in preventing that virulent disease. Should any person still entertain such opinions, his fears must be very considerably diminished by the facts stated at page 62 in the Seventh Report of the Registrar-General, just published. According to that official document, the number of deaths from small-pox, throughout England and Wales, during five consecutive years, were as follows:—In 1838, 16,268 persons died of that disease; in 1839, 9,131; in 1840, 10,434; in 1841, 6,368; and in 1842, only 2,715 deaths are reported. Nothing can be more conclusive than this statement; and although some of your readers may be cognizant of the facts, still, as others may not yet have had access to the Report in question, I am induced to send this communication, in the hope that you will allow it a place in your influential journal, and so give greater publicity amongst the profession to a circumstance connected with the diminution of small-pox, which appears interesting, and should be generally known.

Medicus.

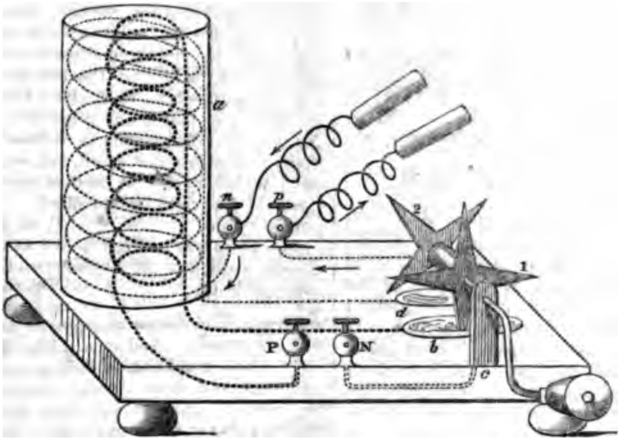
Nov. 3, 1846.

A DESCRIPTION OF A NEW ELECTRO-MAGNETIC MACHINE, ADAPTED SO AS TO GIVE A SUCCESSION OF SHOCKS IN ONE DIRECTION.

BY H. LETHEBY, M.B.
Lecturer on Chemistry at the London Hospital.

The ordinary galvanic machines have this disadvantage; they give a rapid succession of shocks which alternate in their direction: for example, at each vibration of the armature, or at each make and break of the primary current, a shock is produced by reason of an induced or secondary one: but it happens that these two shocks pass in opposite directions; that from the make, for instance, going one way, while that from the break goes in the other, so that in effect they just neutralise their remedial powers.

To obviate this difficulty I have ventured to suggest the following contrivance:—



P, a connecting screw, communicating with the positive pole or the silver plate of a Smee's battery; at its base it is soldered to one end of the primary coil, which is placed in the cylinder *(a)*: the other end of the coil passes down, and terminates in the mercury trough *(b)*, in which a wheel, with four spokes or cogs, is made to rotate, so as to make and break contact. It thus brings back the current by the axis and its support *(c)* to the connecting screw (N), with which the negative pole or zinc plate of the battery is to be connected.

The secondary coil, which is very long, and composed of fine wire, commences at the connecting screw (N), then passes to the bottom of the cylinder (*a*) to be coiled in the same direction, and up and down over the primary coil; from this it passes to the mercury trough (*d*), in which another wheel, with 4 spokes, is made to rotate, and by means of which contact is made and broken as in the first instance: the circuit, also, as before, is completed by the wheel (2), its axis and support. From the base of this support a wire passes to the connecting screw (P).

The two wheels, 1 and 2, are placed on one axis, with an intervening piece of wood, *so as to isolate* their currents; they, *therefore, rotate* together, and from the *circumstance of the* spokes of one being placed intermediate with the spokes of the other, so that on turning right-handed wheel 2 shall be one-eighth of the rotation behind No. 1, it follows that the spoke of No. 2 will not be in the mercury, and its circuit therefore not complete at the time when contact is made with No. 1, so that the make shock is not permitted to pass, but the spoke of No. 2 will be in the mercury at the time when No. 1 leaves it; that is, at the break, and then the shock will be felt. On reversing the motion of the wheels we reverse the other effects also.

With reference to the *direction of the current*, if the positive and negative poles of the battery are fixed at P and N as directed, and the two coils are put on in the same direction as was also directed, then on turning the wheels right handed, so as to obtain the break shock, the current will be in the direction of the arrows, and the connecting screw (*p*) will be the positive pole. If, however, the wheels are turned in the opposite direction, so that the spoke of No. 2 leaves the mercury first, then we obtain the make shock, and the current will be reversed, *n* being the positive pole.

It will be always found that the break shock is felt more severely than the other, and this suggests its application to affections of the sensitive nerves; while the other may be used whenever motor action is impaired, or where the sensibility of the part is rather acute, as in affections of the eye, &c.

Another principle to be kept in view is, to pass the current in the route of the vis nervosa, that is, from the centre to the periphery, in motor paralysis, but from the extremities to the centres when the sensitive nerves are affected. If this important principle is not borne in mind, we cannot expect ever to do much good in the application of electricity or galvanism; indeed, there is much reason for believing that the uncertainty of their therapeutic powers may have arisen from a want of observance of this principle.

I may, perhaps, before I leave the subject, refer to the actions of the different machines at present in use. They may be divided into three kinds.

1st, Those which give a constant current and in one direction, as the common electrical machine, and the water or other compound batteries.

2dly, Those which give an intermitting current, but in one direction only, as the machine here described, the Leyden jar, and when sparks or shocks are taken from the common electrical machine.

3dly, Those which give intermitting currents, and which, moreover, alternate in their direction, passing to and fro through the body; as the common magneto-electric and galvano-electric machines.

5, Goswell Road West,
Oct. 30, 1846.

Medical Statistics.

STATE OF THE PUBLIC HEALTH IN THE SUMMER QUARTER, ENDING SEPTEMBER 30TH, 1846.*

THE quarterly returns are obtained from 115 districts, subdivided into 576 sub-districts. Thirty-four districts are in the metropolis, and the remaining 81 comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,579,693 in 1841.

Fifty-one thousand two hundred and thirty-five deaths were registered in the summer quarter ending September 30th: a number greater by 15,227 than the deaths (36,008) in the corresponding quarter of last year. In the mild winter quarter of this year ending March 1846, the deaths were nearly 5,000 below the average; in the spring quarter (June) the mortality was slightly above the average; intestinal complaints then arose, and becoming epidemic, have been the principal cause of the immense loss of life on record.

Respecting the proximate causes of the mortality in London, the weekly tables furnish full information. The deaths in the summer quarter were 10,842 in 1845, and 12,409 in 1846. Of the excess of 1,567 deaths, 1,303 were from diarrhœa, cholera, and dysentery; which proved fatal respectively to 1,549,197, and 75 persons. The mortality by intemperance, delirium tremens, jaundice, liver diseases, and rheumatism, was also greater than usual. Inflammatory diseases of the lungs, and influenza, lay in abeyance; as if the morbid force has directed and expended itself on the digestive organs. No death from hydrophobia appears to have been registered during the last three summers. The five weeks from July 11th to August 15th were the unhealthiest; 1,100 deaths, exclusive of those by violence, were registered in the first week of August; the numbers then fell off, and only amounted to 783 on the last week of the thirteen. Upon comparing the facts in the table, it will be seen that young children were the chief sufferers. Indeed, the form of the disease—which has long been prevalent in the cities of America—is designated in their bills of mortality *cholera infantum*. The disease also proved fatal to many old people. And some adults died of attacks which could not, in their symptoms, be distinguished from Asiatic cholera. It was, however, quite evident from the first that the epidemic had not the characters of that malady which broke out here in the winter of 1832, but was closely allied to the cholera described by Sydenham, which he says lasted a month, and—"*eam anni partem, quæ æstatem fugientem atque autumnum imminentem complectitur (unice ac eadem prorsus fide, qua veris primordia hirundines, aut insequentis tempestatis fervorem cuculus), amare consuevit.*"* While the deaths in London were little more than 14 per cent. above the return of 1845, th deaths rose from 25,166 to 38,826, or about 52 per cent. after a correction for increase of population, in the towns and other districts of the kingdom included in the return. In some of the densely-peopled towns the mortality was doubled.

In the annual reports and quarterly returns the causes of these differences in the mortality of the several parts of the country, and the population, have been discussed. The high mortality of towns has been traced to crowded lodgings, dirty dwellings, personal uncleanliness, the concentration of unhealthy emanations from narrow streets without fresh air, water, or sewers. The rapidity of decomposition, and the facility with which all kinds of animal matter become tainted, and run into putrefaction, enable us to understand how, in a summer like the past, in which the temperature was unusually high, the diseases referable to an impure atmosphere should be so prevalent and fatal.

---

* For our report *of the preceding quarter see page 261.*

* Sydenham Opera, Obs. Med. Anni 1669. He also describes the severer epidemic of 1676. "Insueto tempestatis calore evectus."

The Seventh Annual Report, 8vo. edition (pp. 330—338), contains some calculations which set in a striking light the extent to which human life and health have hitherto been sacrificed. The calculations have been made with great care; they are based upon the returns of deaths for the seven years 1838-44, and the census taken in 1841, the middle of the period. It appears, to give a few examples of the results, that the annual deaths in the town districts of Manchester to 1000 males living are 37, in the extra-metropolitan parts of Surrey 19 in 1000. To take particular ages, the annual mortality of boys under 5 years of age is 48 in Surrey, 148 in Manchester to 1000 boys living. Of men of the age of 35, and under 45, the annual mortality is 11 in Surrey, 21 in Manchester, to 1000 living. The enormous difference will be rendered more obvious to some by the simple facts—

		Deaths registered in the 7 years 1838-44.
Population of the town sub-districts of Manchester in 1841	163,856	39,922
Population of the extra-metropolitan districts of Surrey .	187,868	23,777
	Difference	16,145

The population of Surrey exceeded that of Manchester, yet in 7 years 16,000 persons died in Manchester over and above the deaths in Surrey, the mortality in which, from the poverty of the labourer, and slighter degrees of the influences so fatal in Manchester, is higher than it should be. There were 23,523 children under 5 years of age in Surrey, and the deaths of children of that age were 7,364; the children in Manchester were 21,152, the deaths 20,726! In the seven yeare, 13,362 children in Manchester alone fell a sacrifice to known causes, which it is believed may be removed to a great extent; and the victims in Liverpool were not less numerous. Other parts, and particularly the *towns* of England, are similarly afflicted.

The returns of the past quarter prove that nothing effectual has been done to put a stop to the disease, suffering, and death, in which so many thousands perish. The improvements, chiefly of a showy, superficial, outside character, have not reached the homes and habits of the people. The house and children of a labouring man can only be kept clean and healthy by the assiduous labour of a well-trained industrious wife, as any one who has paid the least attention to the subject is aware. This is overlooked in Lancashire, where the woman is often engaged in labour from home. The consequence is, that thousands, not only of the children, but of the men and women themselves, perish of the diseases formerly so fatal for the same reasons in barracks, camps, gaols, and ships.

Metropolis.	Population	Deaths registered in the Quarter ending September 30th.						
		1840	1841	1842	1843	1844	1845	1846
West Districts . .	301,326	1,597	1,499	1,638	1,664	1,822	1,559	1,815
North Districts . .	366,303	2,116	1,853	2,085	2,017	2,293	1,829	2,398
Central Districts .	374,759	2,124	2,152	2,154	2,123	2,190	2,075	2,201
East Districts . .	393,247	2,477	2,382	2,540	2,547	2,547	2,637	2,859
South Districts . .	479,469	2,898	2,681	2,808	2,920	2,973	2,742	3,136
Total	1,915,104	11,212	11,567	11,225	11,271	11,825	10,842	12,409

A Table of the Deaths in the Metropolis, from all causes, registered in the quarters ending September 1845-46.

Causes of Death.	Quarters ending Sept. 1845.	1846.
ALL CAUSES . . .	10842	12409
SPECIFIED CAUSES . .	10802	12364
Small Pox . . .	76	51
Measles	688	78
Scarlatina . . .	194	208
Hooping Cough . .	385	355
Croup . . .	75	66
Thrush	105	113
Diarrhœa	449	1549
Dysentery	43	75
Cholera	26	197
Typhus	273	403
Sudden Deaths	91	63
Hydrocephalus	421	448
Apoplexy	266	273
Paralysis	184	221
Convulsions	608	513
Bronchitis	191	271
Pleurisy	28	30
Pneumonia	[illegible]	[illegible]

Asthma	101	95
Phthisis or Consumption	1558	1784
Disease of Lungs, &c.	123	111
Pericarditis	12	20
Aneurism	11	10
Disease of Heart, &c.	348	321
Teething	217	138
Childbirth	70	80
Violent Deaths	342	403

The supply of water, and the removal of refuse from the surface, or of matters in solution or suspension through the sewers, are "simple engineering questions, the success of which," in the words of Mr. Smith, of Deanston, "is certain, while the cost can be estimated on known data." The wealthiest and most populous parish in the metropolis—Marylebone—is an example of the imperfect manner in which these questions are solved in the present state of the law. The parish, on an area of about 1490 acres, had 14,169 inhabited houses, and 138,164 inhabitants, in 1841. The annual value of property rated for the relief of the poor in the same year was £815,279,—£57 to each house; yet a considerable part of the parish is without sewers, or any direct open communications with the sewers. It is said, though the information on this head is imperfect, that half the houses in the parish have cesspools, many of which remain unemptied from year to year. The vestry, under the Local Act, is empowered "to nominate persons to carry out the *dust, dirt, cinders*, or *ashes*;" yet no effectual arrangements are made for the removal of decaying animal and vegetable matters—the "filth" and "noxious matters" which are really prejudicial to health. The contracts only apply specifically to "ashes," which are innoxious. 897 persons died in the parish last quarter. The condition of other parishes may be conjectured from this specimen.

In the remarks of the registrars, attention is very properly called to the neglect of parents in procuring proper medical attendance for their children. The registrar of Heaton Norris, Stockport, says:—"Of the 120 persons, 53 were children of 1 year and under; and of these deaths of infants the causes were certified by a medical attendant in only 28 cases. It is to be feared that many at this age are lost for want of medical assistance and care of the mother, who is soon obliged to leave her child in other hands, and go forth to engage in constant and unwholesome toil. The child sickens, and is soothed by opiates." The registrar of Hulme, in Chorlton District, near Manchester, observes:—"When we take into consideration that the infants of the poor are, many of them, fed upon innutritious and improper food, and a large portion of them in this district are constantly drugged with narcotics, such as Godfrey's Cordial, paregoric, and miscalled infants' preservatives, inducing a morbid and congested state of the primæ viæ,—that they live in unhealthy localities, in ill or non-ventilated dwellings, surrounded by an atmosphere pregnant with noxious exhalations,—we cease in some degree to be surprised (these remote and predisposing causes existing) that, when an epidemic affecting the abdominal viscera prevails, it should prove so extensively fatal, and more particularly when these poor infants, many of them, have not had the advantage of judicious medical treatment, consequently no chance of recovery. During the last quarter there have been registered very few deaths of children of the higher class of society caused by bowel complaints, they being in a great measure exempt from the predisposing causes before enumerated, and having had the advantage of proper medical assistance. The 298 deaths certified include many that have been seen only once or twice by regular practitioners, having been previously attended by druggists. Deaths not certified, 88, include those where it has not been convenient to get a medical certificate, and those who have not had attendance during the latter weeks of their illness. Deaths not certified, where there has been no proper medical aid, 93, include those that have been attended by druggists, or have had no medical assistance whatever." The registrar of Deansgate, Manchester, remarks: "Of the 279 children, the deaths of only 126 were certified; so that 153 died without any proper medical assistance having been procured for them; and of the certified cases a large number were stated in the medical certificates to have been in a hopeless state, having been ill several days or weeks before medical assistance was sought. The chief cause of mortality has been diarrhœa, and this of a very controllable character, when taken early. Here we have 153 children dying in one district alone in one quarter, without any reasonable attempt having been made to save them; and, if the deferred cases were added, the number would probably not fall short of 200. It is difficult to think of this frightful waste of life without feeling that all other circumstances affecting the mortality of large towns dwindle beside it into insignificance. It is indeed deeply to be deplored that no proper provision has hitherto been suggested and carried out for the preservation of the children of the poor. In all Manchester there is but one children's dispensary, and this has but two medical officers. Such institutions should be numerous in large towns, and much good might be effected; but the unfortunate out-door occupation of the women, by causing the withholding of nature's nutriment from the children, is terribly destructive to the latter."

How pitiful is the condition of many thousands of children born in this world! Here, in the most advanced nation of Europe,—in one of the largest towns of England, in the midst of a population unmatched for its energy, industry, manufacturing skill—in Manchester, the centre of a victorious agitation for commercial freedom, aspiring to literary culture, where Percival wrote and Dalton lived,—*thirteen thousand three hundred and sixty-two* children perished in seven years over and above the mortality natural to mankind! These "little children," brought up in unclean dwellings and impure streets, were left alone long days by their mothers to breathe the subtle sickly vapours, soothed by opium, a more "cursed" distillation than "hebenon," and, when assailed by mortal diseases, their stomachs torn, their bodies convulsed, their brains bewildered,—left to die without medical aid, which, like hope, should "come to all,"—the skilled medical man never being called in at all, or only summoned to witness the death and sanction the funeral.

Medical Intelligence.

LIBERATION OF DR. RENZI.

Dr. Renzi, an eminent Italian physician, condemned to imprisonment for some political offence, has been liberated by order of Pius IX., and has received the appointment of Military Surgeon in the Pontifical Guard.

CHELTENHAM GENERAL HOSPITAL.

On Monday, Nov. 9th, W. Philpot Brookes, M.D., was elected Surgeon to the Cheltenham General Hospital and Dispensary, by a majority of 409 votes.

CUMBERLAND INFIRMARY.

Dr. Henry Lonsdale, F.R.C.P. Edin. was unanimously elected Physician to the Cumberland Infirmary on Wednesday, the 4th inst. in the place of Dr. Goodfellow, resigned.

THE BOTANIC GARDENS AT CHELSEA.

The Society of Apothecaries have appointed Mr. Fortune, on his return from his horticultural expedition to China, Curator of their Gardens at Chelsea, in the room of the late Mr. Anderdon.

PROMOTIONS UNDER THE BREVET.

Assistant-Surgeons to be Surgeons in the Navy. — Leonard D. Buchanan—Robert Haywood—Thomas Tait—John G. Acheson —John Scott Davidson—William Roberts —William Crofton—John Thomas Jenkins — Thomas Crawford — Daniell Ritchie — Ruffell Dalton—Robert Anderson—Edward H. Derriman, M.D.—James George Risk—Alexander Brown—John H. Haire—James G. Buchanan—David Russell—Hugh O'Hagan, M.D.—Henry Jones Domville.

BATH PATHOLOGICAL SOCIETY.

Office-bearers for the first year.—President: Mr. Norman. Vice-President: Dr. Daniell. Treasurer and Secretary: Dr. Davies. Council: Mr. George, Mr. Ormond, Dr. Edwards, Mr. Godfrey, Mr. Waldron, Mr. Field.

DINNER TO PROFESSOR ORFILA AT MADRID.

We learn from the *Gazette Médicale* that a grand dinner has been lately given in honour of Professor Orfila, by the Medical Faculty of Madrid. Various speeches on the state of medicine in France and Spain were made on the occasion by Dr. Rubio, physician to the Queen, Dr. Argumosa, and others. Orfila, who is a Spaniard by birth, appears to have been received in a manner worthy of his great reputation; and the whole of the proceedings passed off very satisfactorily. Dr. Gultieres, dean of the faculty of Madrid, admitted that Spanish physicians had done but very little for medicine ;in a *literary* way; and we are not aware that they have done more for it in *practice*. If our readers are desirous of making themselves acquainted with the present state of medicine in Spain, we recommend them to turn back to our 36th volume, p. 1124. Mr. Ford properly describes it as a rude veneering of other men's ideas, or an adaptation of ancient and Moorish science: "Unfortunate the wight who falls ill in Spain!"

GUN COTTON—XYLOÏDINE.

At the last meeting of the Academy of Sciences, after several communications on the subject of Gun Cotton, M. Pelouze rose, and made the following observations. He said—"Although M. Schönbein has not published the nature or mode of preparation of his cotton, it is evident that the properties which he assigns to it can only apply to xyloidine. M. Dumas, as well as myself, made this remark in reference to the first communications of M. Schönbein. Reasoning on the hypothesis that the *poudre-coton* is nothing else than xyloidine, I may be permitted to say a few words with respect to its history, and of some of its properties. Xyloidine was discovered in 1833 by M. Braconnot, of Nancy. He prepared it by dissolving starch and some other organic substances, in nitric acid, and precipitating these solutions in water. In a note inserted in the *Comptes Rendus de l'Académie des Sciences*, in 1838, I showed that xyloidine resulted from the union of the elements of nitric acid with those of starch, and explained, by this composition, the excessive combustibility of the substance produced. I ascertained—and this I think is a very important result in the history of the applications of xyloidine—that, instead of preparing it by dissolving the cellulose, it might be obtained with infinitely greater facility and economy by simply impregnating with concentrated nitric acid, paper, cotton, and hemp, and that these organic matters thus treated took fire at 180 degrees, (356° F.) and burnt almost without residuum, and with excessive energy; but I think it right to add, that I never for an instant had an idea of their use as a substitute for gunpowder. The merit of this application belongs entirely to M. Schönbein. Eight years ago, however, I prepared an inflammable paper by plunging paper into concentrated nitric acid. After leaving it there for 20 minutes, I washed it in a large quantity of water, and dried it in a gentle heat. I have recently tried this paper in a pistol, and with about three grains pierced a plank two centimetres in thickness (rather more than three-quarters of an inch) at a distance of 25 metres (82 feet). After these observations made by M. Pelouze, MM. Piobert and Morin addressed the Academy. They stated that several experiments had been made by engineers of the artillery with explosive cotton, and that the result was not satisfactory. It was found to leave behind a residuum of charcoal and water, and that it frequently escaped by the touch-hole from the cannon without displacing the ball. They added, that cotton prepared with an equal mixture of sulphuric and nitric acids was the most powerful, as it exploded at a temperature of 75 degrees (135° F.) Some even exploded spontaneously at 100 (212° F.) The conclusion appears to have been, however, that none of the preparations tried were fit substitutes for gunpowder.

We subjoin an extract from a letter addressed by M. Schönbein to M. Dumas, and published in the *Comptes Rendus*, Oct. 5th, 1846.

"You are aware that I have discovered an easy method of converting common cotton into a substance resembling gunpowder. Its explosive force is much greater than that of the best gunpowder, and the experiments which I have performed with it in the mines of Cornwall as well as at Bâle, in the discharge of cannon and mortars, have proved that a pound of this explosive cotton under given circumstances produces all the effects of from two to four pounds of common gunpowder. When well prepared there is no residue, nor is there any smoke in the discharge. In manufacturing the cotton there is *no risk of explosion*, and the buildings required for the manufacture are inexpensive."

Many crude remarks have been published upon the manufacture, composition, and properties of this singular substance. We do not take notice of them, because they add nothing to what has already appeared in our columns on the subject. The properties of the gun cotton vary greatly according to the mode in which it is made; and the explosive compound appears to be produced more readily, and with greater certainty, by the admixture of the two acids—nitric (3 parts) and sulphuric (2 parts by measure)—than by nitric acid separately: an immersion of the cotton from a minute to a minute and a half being sufficient. As to mere cost it is more expensive than gunpowder, and its bulk appears to render it disadvantageous as a substitute; but if, weight for weight, it will produce from four to ten times the effect, and it can be safely employed in large quantities for artillery, then it will be likely to take the place of that compound. Further experiments are, however, required to determine these points, and therefore it would be a waste of space to publish conflicting theoretical opinions on the subject.*

HEALTH OF TOWNS ASSOCIATION.

A MEETING of the Health of Towns Association was held last week at the rooms of the Statistical Society, St. James's Square. A committee of the association have drawn up a report on the provisions of the measure of the late government for the improvement and drainage of towns, and the object of the present meeting was to adopt the best means of circulating that report and directing the attention of the public and the Government to its suggestions. Lord Ashley was called to the chair.

The Hon. F. BYNG proposed the first resolution:—

"That this association regards with great apprehension the exclusion of the metropolis, and of Scotland and Ireland, from the immediate operation of any sanitary measure, and respectfully urges upon Her Majesty's Government the desirableness of causing a report to be prepared, developing every special and peculiar means that may appear to be necessary for bringing these important portions of the empire under one general act."

He adverted to the singularly defective state of the drainage in London, and particularly of the western and more wealthy portion of it.

The resolution was carried unanimously.

Lord EBRINGTON, M.P., moved as a resolution—

---

* We understand that M. Schönbein has sold his patent right in England for £40,000.

"That copies of the report of the association be forwarded to the authorities of the principal towns in Scotland and Ireland, and to their representatives in Parliameet, requesting their co-operation in carrying out an efficient and general sanitary measure."

Mr. R. D. Grainger seconded the resolution, observing that the villages in the rural districts required as much attention as large towns; he detailed one case in which continual visitations of typhus fever had been stopped by covering over some stagnant ponds in the middle of the village. He also remarked on an error prevailing extensively among the public, that the interposition of water was a sufficient protection against the escape of noxious gases from sinks and cesspools; such was not the fact: as soon as the water was saturated with the gas, it escaped into the house or street, to the injury of the health of the inhabitants; yet builders relied wholly on the efficacy of water in preventing these emanations.

The resolution was carried.

Mr. J. Toynbee moved,—

"That the sub-committee be requested to communicate with the branch associations, and with those municipal authorities who have taken active steps for the sanitary improvement of the population, on the general measures of legislation which their own local observation and experience show to be needful for insuring the adoption of efficient preventive measures."

As a gross and crying evil, he particularly noticed the existence of cattle-markets in the heart of large towns, such as Smithfield, and of slaughterhouses in every part of the city, creating numerous and intolerable nuisances. The treatment of animals before they were slaughtered was cruel in the extreme, the public health was injured, life perilled, and all the offal which was first brought into the city had to be sent out again,—which was done by filling the sewers. He believed that scrofula and consumption, by proper measures, might be got rid of like typhus fever; and directed attention, not only to towns and villages, but also to mansions and the houses of the rich, which were often very badly constructed.

Mr. W. Howitt seconded the resolution. Before they effected any great improvement they would find themselves compelled to deal with the question of delegated taxation. The Government had given to water and sewer companies monopolies and powers of taxation, without taking any security that they would supply the public properly. He pointed out the operation of the present system in the Tower Hamlets, Hackney, and the East London Water Company. It had been stated that the annual amount of delegated taxation in England was £20,000,000; and judging from his own experience, he should think it much more. The water companies charged high, supplied badly, and monopolized the rivers, from which the public were shut out; on the continent a bathing place could be enclosed from a river at a small expense, and a right of bathing as often as a person pleased could be had during a whole summer for 4s. or 5s.; here no such thing could be done. He dwelt on the horrors witnessed in the dwellings of the poor in case of a death, when the living and the dead decomposing body were found in one apartment. Under Governments called despotic, though they did not allow a man to speak or write what he pleased, no such scenes could occur. A nurse could not attend the sick without having given some proof of qualificaton for the duty, &c. In Germany, in case of death, it was the nurse's duty instantly to apprise the inspector of the dead (*Der Todtenarzt*), who directs the funeral to be performed, which is also done by the Government. In cases of contagion, the Government coffin is instantly sent, the body screwed down and conveyed away. He thought such facts as these ought to be brought before the public.

Mr. H. Rich moved,—

"That her Majesty's Government be respectfully requested to grant a deputation of the association a conference on the suggestions contained in their report; and that deputations from the several branch associations in England, Scotland, and Ireland, be invited to attend."

Dr. Southwood Smith seconded the resolution. He stated that his own experience of the London Fever Hospital was strictly in accordance with the report of the Registrar-General; lately the disease had become epidemic, more severe in character, and attended by greater mortality, and all the returns speak of mortality having increased; the registrars' comment was repeatedly, that it it was "the largest number since the passing of the Registry Act," and similar entries. Nearly ten years had lapsed since this state of things was exposed, yet nothing effectual had been done to put a stop to disease, suffering, and death; their improvements had been showy, superficial, and outside; they had not touched the houses or habits of the people. Every one who had worked for the improvement of the condition of the people must have felt his spirit quail within him; but it was disheartening indeed to hear that nothing had been done. And if every thing was effected that they now proposed to do, still they should but have begun. A Government might give the people good drainage, pure air and water, but it could not enter their houses;

it could not make the home; here the schoolmaster must step in; here the teacher of religion must labour. And it was to accomplish the first great improvement that their efforts must be directed; they must succeed in this before the smallest advancement could be made in the other direction. He trusted the Government would consent to meet a deputation on the subject.

The resolution was adopted, and also another inviting the contribution of funds towards circulating the report, and the purposes of the society, whose means are nearly exhausted.

A vote of thanks having been passed to Lord Ashley, which he briefly acknowledged, the proceedings terminated.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 31.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	691	Males....	490	Males....	493
Females .	654	Females .	487	Females .	475
	1345		977		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population, in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	125
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	167
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	178
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	221
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	286
Total	977

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years

		A.	B.
ALL CAUSES	977	1000	968
SPECIFIED CAUSES	973	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	164		
2. Dropsy, Cancer, &c. of uncertain seat	95	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	156	151	157
4. Lungs, and other Organs of Respiration	298	313	294
5. Heart and Blood-vessels	47	29	27
6. Stomach, Liver, and other Organs of Digestion	84	70	72
7. Diseases of the Kidneys, &c. ..	13	8	7
Childbirth, Diseases of the Uterus, &c.	22	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c..........	11	6	6
10. Skin, Cellular Tissue, &c.	3	2	2
11. Old Age	49	66	67
12. Violence, Privation, Cold, and Intemperance	31	27	26

The following is a selection of the numbers of Deaths from the most important special cause:

Small-pox	5	Convulsions	43
Measles	12		
Scarlatina	22	Bronchitis	46
Hooping-cough..	21	Pneumonia......	63
Diarrhœa........	26	Phthisis	137
Cholera..........	1	Dis. of Lungs, &c.	23
Typhus	55		
		Teething........	8
Dropsy..........	11	Dis. Stomach, &c.	6
Sudden deaths ..	10	Dis. of Liver, &c.	16
Hydrocephalus ..	40	Childbirth	17
Apoplexy........	30	Dis. of Uterus, &c.	4
Paralysis........	14		

REMARKS.—The total number of deaths was 23 below the autumnal and 9 above the annual average. The most prevalent and fatal disease at present is Typhus fever. In all the districts, except the South, the mortality was below the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....30·01
" " Thermometer[a]............43·2
Self-registering do.[b] ......max. 56·2 min. 30·
" in the Thames water " 0· " 46·8

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·12: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 5·7° below the mean of the month (48·9°). The extreme hebdomadal range in the self-registering thermometer was 26·2°.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, *Nov.* 6th.—R. H. Leach.—T. W. Bradley.—W. B. Beatson.—R. Gething.—J. Rambaut.—H. Murney.—J. Bland.—J. Barber.—F. Hope.—H. Sandwith.—J. T. Brooke.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Nov.* 5th.—John Elliott Snow.—Richard Norris Bower.—John Archibald Jones Martin.

NOTICES TO CORRESPONDENTS.

We have received a long communication from Mr. T. S. Beck, in answer to certain objections stated in our late review of that gentleman's memoir on the Nerves of the Uterus. Several of the remarks supply certain deficiencies which we found to exist in Mr. Beck's original paper. The other portions of his communication are evidently written under an entire misapprehension of the obvious meaning of our observations. We stated in our review,—not that we believed Mr. Beck's views to be erroneous,—but that we observed several points in his essay in which the evidence he has adduced, decidedly fails to afford absolute proof of his main conclusions. This opinion we still maintain. We are always unwilling to refuse insertion to original observations; but we cannot give place to criticisms upon our own analyses and notices of books.

Mr. J. Russell.—Mr. Snell's case of extensive Laceration of the Genital Organs was inserted in our number for October 9th, page 622.

Dr. Coley's paper on the Diseases of Infants shall have early insertion.

Mr. Pittard's letter on Fracture of the Neck of the Femur shall be inserted if possible next week.

Mr. Phillips's Clinical Lecture, and Dr. Snow's paper on Alkalescent Urine, will be inserted in the following number.

The subject referred to by Dr. Orpen shall receive our attention. The publication of the letter, or any part of it, would be exactly what the supporters of homœopathic quackery would desire.

We regret that owing to the great length of Mr. Harvey's paper and our unwillingness to divide it, we have been compelled to postpone its insertion until next week.

Mr. Pearl's letter on the treatment of Calculus in the Female will appear in the following number.

The great length of our reports of the Proceedings of Societies has compelled us to postpone several communications which are in type.

Mr. Tyerman's request shall be attended to.

We are obliged to Mr. Lawrence for his case. A proof shall be sent.

Dr. Nevins's letter on Gun Cotton next week.

Gratis, on application, or through any Bookseller, or prepaid for four penny-stamps.

A CATALOGUE of MR. CHURCHILL'S PUBLICATIONS in MEDICINE, SURGERY, and SCIENCE.

Princes Street, Soho.

NOTICE. — "THE LONDON MEDICAL DIRECTORY" and "THE LONDON AND PROVINCIAL MEDICAL DIRECTORY." The Proprietor begs to notify that circular forms have been issued to every known qualified practitioner in England and Wales. Any gentleman who may not have received one is respectfully requested to apply, without delay, to the Editors, care of Mr. Churchill, Princes Street, Soho, who is appointed by the proprietors sole publisher of these important works. Take care to address the "Editors of the London and Provincial Medical Directories;" as, owing to misdirection, it is feared valuable communications have not reached their proper destination.

MEDICAL, LEGAL, and GENERAL MUTUAL LIFE ASSURANCE SOCIETY,

126, Strand, London.

TRUSTEES.

James Copland, M.D. F.R.S.
Vere Fane, Esq.
John Billingsley Parry, Esq. Q.C.
John Romilly, Esq. Q.C. M.P.
James Russell, Esq. Q.C.

DIRECTORS.

John Billingsley Parry, Esq. Q.C. Chairman.
George Hilaro Barlow, M.D.
Daniel Cornthwaite, Esq.
Fred. John Farre, M.D. F.L.S.
Thomas Webb Greene, Esq.
Richard Jebb, Esq.
John Chas. W. Lever, M.D.
William John Little, M.D.
John Parrott, Esq.
Richard Partridge, Esq. F.R.S.
Richard Quain, Esq. F.R.S.
Robert Smith, Esq.
Frederick Thomas White, Esq.
John Hayman Whitenay, Esq.

The principle of Mutual Assurance is the most beneficial to the Assured, amongst whom the whole net profits are divisible.

The Society is the only one connected with the Medical or Legal Professions founded on the Mutual Principle.

The business of this Society embraces Assurances, Annuities, and Endowments of every description.

Prospectuses, forms of proposal, and every further information, will be readily supplied on *application*, either personally or by letter, to

R. Wilsdon Morris, Actuary.

A GENTLEMAN, fully qualified, and of active habits, is desirous of purchasing a PARTNERSHIP in a well-established General Practice. Or the advertiser would purchase the PRACTICE of a gentleman about to retire from the profession. References will be given and required.—Address by letter (prepaid), from principals only, to M. B., care of Messrs. Layton, Booksellers, 150, Fleet Street, London.

UNIVERSITY of LONDON.—The following Works have been selected by the Examiners for the Examination in Logic and in Moral and Intellectual Philosophy, for the Degree of Doctor of Medicine, in the year 1846:

Logic—Bacon's Novum Organum, Part I.

Philosophy of the Mind—Cousin's Analysis of Locke's Essay (being the 3d volume of his Cours de Philosophie).

Moral Philosophy—Butler's Analogy, Part I.—Stewart's Outlines of Moral Philosophy.

By order of the Senate,
R. W. Rothman, Registrar.
Somerset House, Nov. 6, 1845.

ROYAL COLLEGE of SURGEONS of ENGLAND.—Notice is hereby given that EXAMINATIONS for the FELLOWSHIP will take place at this College on Tuesday the 1st and Thursday the 3d of December next.

The Bye-Laws and Ordinances relating to the Fellowship, with other particulars, may be obtained on application to the Secretary.

The requisite Certificates and Testimonials must be forwarded to the College at least ten days before the period appointed for the Examination.—By order,

Edward Belfour, Sec.
November 6th, 1846.

MEDICAL PRACTICE, £600 and upwards ANNUALLY.—In a populous and wealthy district within an English county, not far from the River Severn, a Gentleman's PRACTICE FOR DISPOSAL. The County healthy and picturesque.—N.B. A moiety of the purchase money may remain on security if desired. The Practice of full standing.—Application, by letter or otherwise, to Mr. Pyke, Medical Agent, 87, Chancery Lane, and Verulam Chambers, Chancery Lane.

This day is published, price 3s.

LIEBIG'S QUESTION to MULDER

tested by Morality and Science. By Dr. J. G. Mulder, Professor of Chemistry in the University of Utrecht. Translated by Dr. P. F. H. Fromberg. With an Introduction, by James F. W. Johnston, M.A. F.R.SS. L. & E. F.G.S.

William Blackwood and Sons, 45, George Street, Edinburgh, and 37, Paternoster Row, London.

Just published, in one thick volume, the Third Edition with considerable additions, 8vo. cloth, 21s.

PRINCIPLES of HUMAN PHYSIOLOGY.

By W. B. Carpenter, M.D. F.R.S. With numerous Illustrations on Steel and Wood.

London: John Churchill, Princes Street, Soho.

Just published, illustrated with numerous Engravings on Wood by Bagg, fcp. 8vo. cloth, 12s. 6d.

A MANUAL of MATERIA MEDICA and THERAPEUTICS.

By J. F. Royle, M.D. F.R.S. Professor of Materia Medica and Therapeutics in King's College, London.

London: John Churchill, Princes Street, Soho.

O-CHIRURGICAL TRANSACTIONS.

d This Day, 8vo. with eleven plates and
merous woodcuts, price 16s. cloth,

DICO-CHIRURGICAL
ANSACTIONS, published by the Royal
and Chirurgical Society of London.
XXIX. Second Series.—Vol. XI.

NTS:—Dr. Johnson on the Minute Ana-
l Pathology of Bright's Disease of the
—Dr. Warren's Case of Ligature of
an Artery.—Mr. Vincent's Cases of Liga-
Carotid Artery.—Mr. Arnott's Case of
and Ligature of Posterior Tibial Artery.
get's Case of imperfect Corpus Callosum.
. Hewett on Aneurism.—Dr. Spitta on
.—Mr. Rainey on Ganglionic Character
noid Membrane.—Mr. Acton's Case of
sity.—Mr. Liston on wounded Arteries,
. Dixon's Case of Tumor in Fifth Nerve.
utchinson on the Respiratory Functions.
wdell's Case of Hydatid Cyst.—Mr. Cur-
Varicocele treated by Pressure.—Mr.
ase of Congenital Deficiency of Kidney
bscess in the Neck communicating with
Dr. Jackson on Derangement of Struc-
Spleen.—Mr. Cumming on a Luminous
nce of the Human Eye.—Mr. Toynbee on
nate Structure of the Human Kidney.—
nson on Relation between Constituents
and Systems of Animals.

nan, Brown, Green, and Longmans.

---

d This Day, in 1 closely-printed volume,
16mo. price 10s. 6d. cloth,

D-BOOK of HUMAN ANA-
MY, General, Special, and Topographical.
ed from the German of Dr. ALFRED VON
and adapted to the use of the English
by JOHN BIRKETT, F.L.S. Fellow of
al College of Surgeons of England,
trator of Anatomy at Guy's Hospital.

book will be found a useful vade-mecum
udent, from the method of its arrange-
e minuteness of its particulars, and the
f its description. It is to be regarded
panion to the dissection-room, or a re-
o the professional man."—SPECTATOR.

Longman, Brown, Green, & Longmans.

ICAL APPRENTICE.—There
a VACANCY for an APPRENTICE in
sex County Hospital, Brighton.—For
rs apply to Mr. Edward Kent Parson,
se-Surgeon. The Hospital contains 100
and upwards, and is a recognised school
cal medicine and surgery.

CHESTER UNION.—ASSIS-
NT MEDICAL OFFICER.—The Guar-
the Manchester Union will be prepared
e, on or before Wednesday the 18th inst.
ons for the appointment of ASSISTANT
L OFFICER to the Workhouse. The
ions required are a Diploma, from either
l College of Surgeons of London, Edin-
r Dublin; and the Licence of the Apo-
' Company of London. Terms, £100
m, the gentleman to reside out of the
ment, but in the immediate vicinity
and to devote his whole time to the
the office. All applications to be en-
'Medical Officer's Application," and
d to me at my office, New Bridge Street.

By order, &c.
NO. HARROP, Clerk to the Guardians.

Union Offices,
ridge Street, Manchester.
November 2d, 1846.

DR. LATHAM ON DISEASES OF THE HEART.

Published This Day, Vol. II. 12mo. 8s. cloth,

LECTURES on Subjects connected with CLINICAL MEDICINE, comprising Diseases of the Heart. By P. M. LATHAM, M.D. Physician-Extraordinary to the Queen; and late Physician to St. Bartholomew's Hospital.

⁂ The work complete in 2 vols. 12mo. 16s.

Longman, Brown, Green, and Longmans.

Just published, 8vo. price 10s. 6d. cloth,

THE NATURE and TREATMENT of GOUT. By W. H. ROBERTSON, M.D.

"We have read this treatise with much interest, and we are sure that every one that opens the volume will allow that it is not only replete with information brought down to the latest period, and of a very practical character, but that it is conveyed in an agreeable and interesting manner. It is difficult to specify any one part of the volume as more deserving attention than another, for all are ably done."

EDIN. MED. AND SURG. JOURN.

London: John Churchill, Princes Street, Soho.

ROBINSON ON THE TEETH.

Just published, with 139 Engravings, price 10s.

THE SURGICAL, MECHANICAL, and MEDICAL TREATMENT of the TEETH; including a complete Treatise on Dental Mechanism. By JAMES ROBINSON, Surgeon-Dentist to the Metropolitan Hospital, &c. &c.

W. Webster, 60, Piccadilly, London; Lindsay and Blakiston, Philadelphia, U.S.

TO HUMAN and COMPARATIVE ANATOMISTS, DENTISTS, &c.—Messrs. J. C. & S. STEVENS are instructed to SELL BY AUCTION, at their Great Room, 38, King Street, Covent Garden, on Wednesday, November 18th, at Twelve for One o'clock, the MUSEUM of an EMINENT DENTIST retiring from the Profession: comprising a large Collection of Specimens of Human and Comparative Anatomy, Skeletons of Monkeys, Birds, Boa Constrictors, Heads of the Lion, Tiger, Tapee, Crocodile, &c.; New Zealand tattooed Heads; a very fine Human Female Skeleton; and Preparations of the Jaws, illustrative of the Science of Dental Surgery.—May be viewed the day prior to and morning of Sale, and Catalogues had of the Auctioneers, 38, King Street, Covent Garden.

ROYAL GERMAN SPA, THE PARK, BRIGHTON.

UNDER HER MAJESTY'S ESPECIAL PATRONAGE.

STRUVE'S PUMP-ROOM and PROMENADES, offering every facility for taking the under-mentioned Mineral Waters, in the same perfection as at the natural Springs, ARE NOW OPEN for the TWENTY-FIRST SEASON.

Struve's Carlsbad, Ems, Vichy, Saltzbrunnen, Saratoga, Homburg, Kissingen, Marienbad, Eger, Spa, Pyrmont, Pullna, Seltzer, Fachingen, &c. are also sold in bottles, and orders for them executed throughout the year, by Struve and Co. Brighton; by their agents, G. Waugh and Co. Chemists to the Queen, 177, Regent Street, London; and by many other respectable houses in London and the provincial towns, where a printed account of the waters, with the highest medical testimonials, may be obtained gratis.

Struve and Co. feel it necessary to caution the public against spurious articles.

THE
DUBLIN QUARTERLY JOURN
OF
Medical Science.

No. IV. FOR NOVEMBER, 1846, CONTAINS:—

Original Communications.

1. On Chlorosis and Hæmorrhage. By Sir **Henry Marsh**, Bart., reported by D
2. On Excision of the Cervix Uteri for Carcinomatous Diseases. By J. Y. **Simpso** Edinburgh. With Illustrations.
3. On the Cure of Popliteal Aneurism by Compression. By J. M. **O'Ferral** With Illustrations.
4. On the Efficacy of Electricity, Galvanism, Electro-Magnetism, and] Electricity, in the Cure of Disease. By M. **Donovan**, Esq.

Reviews and Bibliographic Notices.

Brodie's, Liston's, Chelius's, Ferguson's, and Miller's Surgery.—Parkes on the D and Hepatitis of India.—Coley on the Diseases of Children.—Patterson's Zo Makellar on Black Phthisis.—Burrows on Diseases of the Cerebral Circul Leeson's Exposition of Liebig's Physiology.—Griffith on the Blood and Secretions.—Swedenborg's Economy of the Animal Kingdom.—Rees on th and Urine in Health and Disease.

Retrospects, Reports, and Scientific Intelligence.

Proceedings of the Pathological Society of Dublin.—*Medical Miscellany*—Cons Cases by Drs. **Hamilton**, **Ellsworth**, **Humfrey**, **Marshall**, **Aston** **Purdon**, **O'Flaherty**, **Purefoy**, **Cusack**, and **Wilde**.—*Obituary*—Biog Memoir of Dr. Bartholomew Mosse, founder of the Dublin Lying-in Hospit *a Portrait*). Index to Vol. II.

OPINIONS OF THE PRESS.

"The Dublin Medical Journal, which has long ranked as one of the most able represent Medical Science in Ireland, has recently been transformed into a Quarterly Periodical, u editorship, we understand, of Mr. Wilde. . . . . We have no doubt that the Dublin Quart prosper, and increase the high character which it bears in periodical medical literature. number, which we have now before us, promises well for the future. . . . . . We wish temporary every possible success. We have the highest opinion of the Irish Medical Sc school remarkable for its sound clinical character, and its freedom from speculative fanc wish well to its representatives in the Medical Press."—**Lancet**, February 14th, 1846.

"We have been led to the exult in the memorials of literary and scientific greatness beq to us by the illustrious Irishmen of former days; a periodical, such as that before us, tells spirit which animated them still exists; and we should be unjust to the eminent men of the age did we not acknowledge, that at no period in the annals of this, or any other nation, steady and increasing light of medical science shone with brighter lustre. It is for the yo appreciate the responsibility, as well as privilege, of sustaining and spreading an illumina honourable to their country."—**Dublin Hospital Gazette**, April 1st, 1846.

"Distinguished as it has heretofore been for ability, and the avoidance of anything offen good taste, the character of those by whom it is hereafter to be conducted, no less than the ev furnished in the number before us, afford a sure guarantee that it will maintain its position the ablest and most valuable medical periodicals of the day."—**Philadelphia Mi Examiner**, June, 1846.

"This Journal, which has flourished from the year 1832 until the present time, during period twenty-eight volumes have been published, has now assumed a new and enlarged form pages are devoted to medical and surgical science in all its branches, including Chemistry, Medica, and Botany; 'unconnected with medical politics, and influenced by party feeling, je or personal hostlity.' . . . . . . It is satisfactory to observe the increasing disposition prevails, both in England and in Ireland, to encourage and support undertakings description."—**Pharmaceutical Journal**, March 1st, 1846.

Hodges and Smith, 104, Grafton Street, Dublin. Longman and Co.; Sin Marshall, & Co.; and W. S. Orr, London. Sutherland and Knox, Edinburgh. Gla D. Chambers.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish
Sepulchre, in the City of London, by **Eliezer Chater Wilson**, 57, Skinner Street afo
Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the sai
by **William Longman**, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Nov. 13, 1846.

-Vol. XXXVIII. Price {Unstamped, 8d. Stamped.... 9d.
ries, No. 82.]

LONDON
DICAL GAZETTE
OR
Journal of Practical Medicine.

} November 20, 1846. {Also in Monthly Parts.

LECTURES.

Page
rvations on Delirium Tremens, at the Westminster Hospital, illips, F.R.S. Assistant-Surgeon 867

NAL COMMUNICATIONS.

cture of the Cranium, with De- and consequent Hernia Cerebri. e Harvey, Esq. 871
or Fungoid Disease of the Arm sane Patient.—Secondary Hæ- from the Brachial Artery on enth day, induced by Epileptic ons, successfully treated by sion applied at the extremity of el. By Daniel Fletcher Tyer- . Medical Superintendent of the Lunatic Asylum 875
ks on Alkalescent Urine and ic Calculi. By John Snow, M.D. on Forensic Medicine at the School, Aldersgate Street 877

LEADING ARTICLES.

ort of the Poor-law Commis- -Progress of Vaccination among 881
the Anatomy Act.—Supply of to the Schools 882
ence on a recent Trial for Infan- 883

REVIEWS.

viewed in connection with Reform. By Henry R. Madden, in.............. 884
servations on Mineral Waters s: with Notices of some Conti- imates, and a Reprint of the Cold ure. By E. Lee, M.R.C.S. &c. 887
f the Four Seasons—Spring, Autumn, and Winter. By Griffiths, Professor of Chemistry edical College of St. Bartholo- ospital......................... 888
l Diseases. Part 1. On Gonor- l Gleet in the Male. By George Surgeon 888

EEDINGS OF SOCIETIES.

al and Chirurgical Society.— narkable Cases of Encephaloid f the Heart: with Observations. Prescott Hewett, Lecturer on at St. George's Hospital Medi- l 889
Page
Case of Peritonitis, with Purulent Effusion—Spontaneous Evacuation of Pus through the Abdominal Parietes—Recovery. By C. J. B. Aldis, M.D. Physician to the London and Surrey Dispensaries 890
Case of Traumatic Paraplegia: with the Post-mortem Appearances. By Samuel Solly, F.R.S. Senior Assistant-Surgeon to St. Thomas's Hospital, &c. 891
Medical Society of London.—Dr. Hughes on a Case of Disease of the Chest 892
South London Medical Society.—Dr. Silvester on Venous Bruit 894

MEDICAL TRIALS AND INQUESTS.

Charge of Child-murder—Examination of the Body three weeks after Death—Want of Evidence from the condition of the Lungs—Respiration inferred from the condition of the Ductus Arteriosus—Period of Time required for the Closure of the Duct—Ecchymosis before and after Death—Insufficiency of Medical Evidence—Remarks 897

CORRESPONDENCE.

On Osseous Union of the Neck of the Thigh-bone. By Simon Rood Pittard, Esq.... 905
On the Mortality of Children, and the Increase of Population 905
On the Treatment of Calculus in the Female. By G. Pearl, Esq. of Windsor 906
Important Points in Medicine.............. 907
Objections to the use of Gun-cotton in Fire-arms—Production of Nitrous Acid in the Explosion. By J. Birkbeck Nevins, M.B. Lond. of Liverpool 907
Remarks by the Editor 908

MEDICAL INTELLIGENCE.

University of London.—List of Candidates who passed the Second Examination for the Degree M.B. 908
Employment of Bismuth in Diarrhœa 908
Modified Small-pox (Varioloid Disease)—Re-vaccination........................... 909
On Small-pox and Vaccination 909
Quantity of Sulphur in Animal Bodies...... 909

SELECTIONS FROM JOURNALS, ETC.

Converts to Homœopathy.................. 871
Presence of Leeches in the Fountains of Algeria................................. 877
Nature of Lichen, Prurigo, and Impetigo .. 881
Death from the Effusion of the Contents of an Ovarian Cyst after Tapping 884

WEEKLY TABLES, ETC.

[For Advertisements, see next page.

THE NATIONAL INSTITUTE

OF

Medicine, Surgery, and Midwifery.

In accordance with a Resolution adopted at a General Meeting of the Members of the Institute, held at the Hanover Square Rooms, on the 12th day of August last, the Special Committee appointed to conduct the Election of a Council, hereby give notice, that the following Gentlemen were appointed Trustees and Treasurers at the aforesaid Meeting:—

TRUSTEES.	TREASURERS.
Thomas Davis, Esq.	John Dodd, Esq.
James Clayton, Esq.	Edward Tegart, Esq.

And that—

"The Scrutineers having examined all the Balloting Papers for the Election of Council received up to the period fixed, October the 31st, 1846, report the result of the Ballot to be as follows:"—

COUNCIL.

Metropolitan.

Ancell, Henry, Esq.
Bird, James, Esq.
Bowling, John, Esq.
Clayton, James, Esq.
Clifton, Nathaniel, Esq.
Cooke, William, Esq.
Dale, George Thomas, Esq.
Davis, Thomas, Esq.
Dodd, John, Esq.
Fuller, H. P., Esq.
Hardwick, Alfred, Esq.
Headland, Edward, Esq.
Lavies, John, Esq.
Merriman, J., Esq.
Moore, Edward Duke, Esq.
Nussey, John, Esq.
Pennington, Robert Rainey, Esq.
Propert, John, Esq.
Randall, Alfred M., Esq.
Smith, John Sim., Esq.
Squibb, George James, Esq.
Sutton, John, Esq.
Tegart. Edward, Esq.
Webster, George, Esq.

Provincial.

Allison, William, Esq., East Retford.
Barker, T. Herbert, Esq., Bedford.
Bedingfield. James, Esq., Stowmarket.
Bryan, John M., Esq., Northampton.
Burnett, Charles M., Esq., Alton, Herts.
Colthurst, John, Esq., Clifton.
Coward, William, Esq., South Shields.
Dalrymple, Donald, Esq., Norwich.
Dickinson, W. F. D., Esq., Ulverstone.
Hughes, Richard, Esq., Stafford.
Hunt, R. T., Esq., Ridgefield, Manchester.
Hurst, Isaac, Esq., Bedford.
Keele, John Rushforth, Esq., Southampton.
Lowe, Richard, Esq., Bristol.
Martin, Thomas, Esq., Reigate.
Morley, Henry, Esq., Medhurst.
Paget, Thomas, Esq., Leicester.
Rogerson, George, Esq., Liverpool.
Seabrook, Brewster T., Esq., Brighton.
Scale, George J., Esq., Landport, Portsea.
Stedman, James, Esq., Guildford.
Sleight, Robert Peasegood, Esq., Hull.
Thompson, Joseph, Esq., Nottingham.
Warner, Thomas, Esq., Cirencester.

GEORGE ROBINS,
EDWARD JOSEPH,
EDWARD THOMAS COMPLIN, } Secretaries.

NOTICE IS HEREBY GIVEN, that a Meeting of the Council is appointed to take place on Wednesday the 23rd day of December next at the Offices of the Institute 294, Regent Street, to adopt the necessary measures for the Election of a PRESIDENT and Three VICE-PRESIDENTS, and for the transaction of other business.

The National Institute of Medicine, Surgery, and Midwifery, consists at present of 1350 Members, and the Subscription is One Guinea per Annum.

OBJECTS OF THE INSTITUTE.

The principal objects of the Institute are,—to maintain an effective organization of the GENERAL PRACTITIONERS;—to expose, discourage, and suppress, by Registration, and every other practicable means, illegal and unqualified practice;—to employ all legitimate means for the purpose of urging upon the Government and the Legislature, the claims of the General Practitioners of this Country to Corporate rights;—to promote a high standard of Education and Qualification, with a satisfactory test by efficient examination, for every individual authorised by Law to practise Medicine, Surgery, and Midwifery;—and to form, irrespective of the SPECIAL COLLEGES, an Institution comprising within itself the entire range of Medical and Surgical knowledge.

By the constitution of the Institute, ONE-THIRD of the Council will go out of office in August 1847.

In accordance with the Resolution of the last General Meeting of the Members of the NATIONAL ASSOCIATION,—"That henceforward the interests of the National Association of General Practitioners be entrusted to the Council of the National Institute of Medicine, Surgery, and Midwifery—their principles and objects being identical," Notice is hereby further given:—That although the Transactions and Documents issued by the Institute can in future only be furnished to the Members of the Institute, the Council are empowered to communicate with the Members of the National Association, and to call them together in the event of any great professional emergency.

Members of the Profession can obtain information and enrol themselves as Members of the Institute, on application at the office, 294, Regent Street.

It is requested that Post Office Orders be made payable at the Branch Post Office, Old Cavendish Street, to one of the Treasurers, JOHN DODD, Esq. Portman Street, Portman Square; or EDWARD TEGART, Esq. Pall-Mall; and that the gentleman who is to receive the amount be mentioned in the letter of advice.

By order of the Special Committee,
GEORGE ROSS, Secretary, *pro tem.*

November 18th, 1846.

Lectures.

:CAL OBSERVATIONS ON

IRIUM TREMENS,

it the Westminster Hospital,

B. Phillips, F.R.S.

Assistant-Surgeon.

r,—If you were to estimate the
the disease under consideration
ience at this hospital during the
rs, you would be led to suppose
er may be its gravity, it cer-
t of frequent occurrence; but,
you that, although it usually
eatment, the deaths from this
England and Wales amount to
250 annually, it will then be
. our own hospital experience
last two years does not fairly
s prevalence. The fact, too,
lately under treatment three
same time, whilst in the last
he cases under treatment here
ounted to six, shews how falla-
idence may be which is based
limited observation.

cases lately under treatment are
y Upton, aged 43, admitted with
ure; Joseph Harris, aged 48,
nitted with a smashed thumb;
. Tims, aged 50, with injury of

:on, ætat. 43, is at present a
ercy Ward. She was admitted
fracture. The parts were re-
ie house-surgeon; and, when I
e disturbance, both local and
s slight. The next day passed
uietly; but the night was sleep-
third day there was hurry and
ut her demeanour, for which a
ught was ordered. It had no
ct upon her system, and several
night were occupied in scream-
eat violence; but there was no
get out of bed. When I saw
ourse of the succeeding morning,
ity to scream seemed to have
r; but she was incoherent, and
der delusions. She then took
ii Sed. ♏lx., to be followed by
es, at short intervals, until sleep
ed; still the screaming fits re-
ng the night. She then took
of the opium at one dose, and
was cut short by a long sleep;
he awoke she was convalescent,
as *no relapse.*

arris, an old soldier, 55 years of age, presented himself at the hospital on the 18th of June, with a laceration of the thumb of the right hand. The ungual phalanx was crushed, and the head of the first was damaged. The injured portions were removed; and, as there was some mental excitement, he took immediately afterwards ʒiss. of Tincture of Hyoscyamus. His friends stated that he was a hard drinker.

On the following day he was taken into the hospital, and was placed under my care, and the following is the house-surgeon's report. The mental excitement had considerably increased, and the tremor of the delirium was making its appearance. He had given to him immediately Liq. Opii Sed. ♏xxv.; Mist. Camph. ℥i. To take beef-tea and gin at intervals.

Vespere.—Continues the same.—Liq. Opii. Sed. ♏xl.; Spirit. Æth. Sulph. ʒi.; Mist. Camph. ℥i. st.

20th.—He has had no sleep from the opiates. He is rational and quiet, but the excitement of his mind is very great. The tremors continue.—Liq. Opii Sed. ♏xx.; Spirit. Æth. Sulph. ʒi.; Mist. Camph. ℥i. 4tis horis.

21st.—He is much more restless and excited. He has had no sleep, and his bowels are confined.—Pil. Hydrarg. gr. v.; Ext. Colocynth. C. gtt. v. st. Omitte Mist.

Vespere.—The delirium is now furious: so great, indeed, that it requires four men to hold him. The pulse is rapid and feeble, and the tongue is brown and dry.—Liq. Opii Sed. ℈xl.; Spirit. Genevæ, ℥iij. st. et rep. 3tiis.

22d, 3 A.M.—Still the same. He took, with great persuasion, a small quantity of the draught, but refused the rest.—Liq. Opii Sed. ʒi.; Spirit. Æth. Sulph. ʒi.; Mist. Camph. ℥i. st. Et rep. si opus fuerit.

10 A.M.—He swallowed the draught ordered at 3 A.M.; and since that he has had a little sleep—the first that he has had since the accident. He is much quieter; but there yet is great excitement and tremors. The bowels have not acted.—Haust. Cathart. st.; Porter, Oss. 4tis horis.

Vespere.—The bowels have acted freely. In other respects he continues the same.—Liq. Opii Sed. ʒi.; Spirit. Æth. Sulph. ʒiss.; Mist. Camph. ℥i. st. Pt. Porter, 4tis horis.

23d.—Slept for several hours in the night, and is now rational and quiet. Tremors continue.—Pt. Porter, and to have a mutton chop.

23d, *vespere.*—There is no alteration since the morning.—Liq. Opii Sed. ♏lxxx.; Spirit. Æth. Sulph. ʒij.: Mist. Camph. ℥i. st. sumend.

24th.—He had six successive hours of sleep in the night, and he is now comparatively well. The tremors and the mental excitement have left him; and the only thing he complains of is great debility and hunger. The tongue is clean, the pulse quiet, and the bowels are open.—Meat diet, and Porter Oij.

After this date he rapidly convalesced; and on the 8th of July he was made an outpatient; his general health was restored, and the wound on the thumb was rapidly granulating.

John Tims had injury of the head. On the third day, well-marked signs of delirium tremens were manifested; but there was intense frontal headache, flushed cheeks, much heat of the surface, and excited and forcible action of the carotids. We did not therefore rely upon the simple opium plan: we first took away sixteen ounces of blood from the arm, we applied cold to the head, and we administered sixty drops of Liq. Opii Sed., and the man was virtually cured.

Let us refer to another case, not at present under treatment—Henry Masters: he was the subject of Potts' fracture. He was a brewer's drayman, and his case was striking, from the fact that, while under the influence of the disease, he got out of bed, stood up on the injured limb, apparently unconscious of mischief, and caused the bone to protrude through the skin. He had a thick yellowish coat on his tongue; and to remove that the plan followed was, to exhibit an emetic of tartarised antimony, and, as soon as its action was complete, 60 drops of Liq. Opii Sed. was injected into the rectum, and sleep immediately followed. I do not mean to tell you that it might not have happened without the tartar emetic; but certainly the effect of the combination was very striking; and I think that, when that condition of things which was presented in this case occurs, the plan employed was the proper one: at least, the result seems to warrant me in saying so.

The symptoms of this disease are so striking,—so formidable,—so fresh in your recollection,—and, at the same time, the treatment you have just witnessed has been so successful,—that you may reasonably expect from me such assistance as will enable you to comprehend the nature of a disease whose symptoms are so threatening, and yet often so readily subdued by proper treatment.

It is much more satisfactory to me to have to deal with a disease like delirium tremens than with certain other diseases of the nervous system, which, like tetanus, are, in the present state of our knowledge, almost, if not altogether, incurable, whilst in the delirium of drunkards, in a majority of cases, the treatment is usually successful.

This kind of delirium often commences with slight incoherence or unreasonable excitement. In some cases urgent symptoms are suddenly manifested, and from that moment there may be no order, no consequence, no justness in the ideas, in the conversation, or in the actions: there is constant confusion,—continual transposition of names, ideas, and things; there is no rest by day or by night; sometimes a single idea is fixed on the mind,—at other times it is ever changing; but in either case it usually relates to the tastes, or habits, or passions, of the patient. There is constant motion; sometimes moderate,—at other times violent. In some cases constant chattering, and (according to the character of the patient and the intensity of the delirium) menaces and vociferations. There may be flushed cheeks, straining eyes, and profuse perspiration, especially at the upper part of the body; or any of those symptoms may be absent.

A curious and very constant character in this condition is, an utter oblivion of the state which has preceded it; so that, if the ribs be fractured, the patient may sing or vociferate; if a limb be fractured, he may move it about, or even walk upon it; if an operation have been performed, he may employ himself in tearing off the dressing, or in breaking open the wound.

Any of the signs I have mentioned may be observed; but there is much variety in their combination. In all cases there is well-marked delirium; but in most instances the attention can be so fixed for a moment that a rational answer may be obtained to any question proposed. There is almost always a remarkable agitation of the muscular system, considerable cutaneous exhalation, especially over the upper part of the body, and a pulse commonly bearing no correspondence with the apparent gravity of the other symptoms, though it is often frequent. In some cases the delirium is violent, as in Harris's case; in others quiet. In some instances the patient is constantly chattering, as in Upton's case; in others he is silent, as in Tims's case. In some cases, such as Harris's, the patient cannot be kept in bed without force; in others, as in Upton's, there was no desire to get up. The greatest amount of irritability was observed in Harris's case; even when sleeping, under the influence of opium, his limbs, and even his features, were in constant motion. In Tims's case it was not so. Harris would constantly attempt to get up, and when he succeeded he would sit bold upright on the edge of his bed. Masters, a man whom I treated some time ago, walked about, with his leg fractured, and the bone protruding. Thomas, another patient, constantly had his

wound made in the operation for
hernia. In their attempts to get
are frequently unconscious that
ented from doing so by a straight-
other restraint: they seem to
ieavy burden prevents them from
With all the agitation which
sent, the face is often of its
ur: in Upton's case it was so;
arris the countenance was suf-
some cases the eyes are very
iey were so in Harris's case; in
e haggard, and constantly rolling
constant action of the masseters
curious expression to the face;
t crying out soon dries the
saliva becomes very viscid, and
mpts are made to eject it. In
cases there was obstinate con-
d the urine was in small quan-
ation was unembarrassed, the
mparatively slow, and the skin

us see, if we can, what gives
the development of these very
ymptoms.
ictice of the surgeon they usually
wounds or injuries, whether
cident or by surgical operation;
ase does not necessarily follow
ar kind of wound, nor is it con-
particular period of inflamma-
ration, or even cicatrisation.
ever, occur without wounds, or
it inflammation; and therefore
no direct dependence upon either.
w suddenly the abstraction of
treatment of a disease, even
uantity taken is not large; it
ed by any other exhausting in-

ough it be true that this disease
monly observed in persons who
lly indulged in the use of ex-
and that the particular condition
may therefore be fairly supposed
m that stimulation, yet the other
unquestionable, that an exactly
of symptoms may be observed
who have not indulged in the
icating fluids at all. We must
apprehend, come to the conclu-
his state of the brain can be
y more than one class of causes,
can be no doubt that habitual
e is the ordinary precursor of
We found no reason to think
man Upton was not strictly
In the other two cases at pre-
hospital the patients had, no
way to habits of intemperance.
act, that similar symptoms to
unkards' delirium may be ob-
ersons whose *habits have been*
perate, that has induced the

question—What is the real influence of intoxicating fluids in the development of the disease? Are the symptoms commonly a consequence of the action of such fluids on the nervous or mucous systems? or are they a consequence of prolonged excited vascular action produced by other causes? It is believed by some persons that mere contact of alcoholic emanations may induce the condition of the system favourable to the development of the disease; and cases are mentioned where workmen employed in close places, bottling or otherwise, have been thus affected, even when they have been strictly temperate; but all such cases must be regarded with great suspicion. At the same time, there is no reason to doubt that the system may in this way become impregnated. In a person employed in a turpentine distillery, and breathing that atmosphere, we find the urine presenting the characteristic violet odour. Still the fact remains, that the overwhelming proportion of those who suffer from delirium tremens have largely used intoxicating fluids. How they act upon the system is the question in doubt. It is said, for instance, that prolonged stimulation maintains excited vascular action in the brain; and that, when that increased action is suddenly interrupted, a state of atony follows; and that this is the state of things which exists in simple delirium tremens; and that, when the activity of the cerebral circulation is fully restored, the symptoms are dissipated.

It is said, that in the *true* delirium tremens the brain and its membranes present the same appearances as in a state of health. Of my own personal experience, I cannot affirm or deny the correctness of this statement, for I have never been present at the examination of any person who died under those circumstances. In the cases I have had opportunities of examining after death, whether the complications were much or little, the arachnoid has been opaque, or the vessels of the membranes, or the substance of the brain, have been more than usually gorged with blood, or there was slight effusion; and therefore it may be said that they were not true delirium tremens, which is the result of disordered function only.

It has been a question with some persons whether the brain in these cases be usually affected in any other way, than by sympathy, —whether the main derangement be not in the stomach; and the practice of Klapp has been held to support that doctrine. He conceived that there was always clear evidence of stomach derangement some time before the mental disorder occurred; and he conceived further, that when the mental disorder existed, it was often terminated by vomiting. Following up this impression, he exhibited tartar emetic in large doses; and he states that the sleep which is often procured by opium follows as certainly the exhaustion of vomiting, and that the patient awakes convalescent.

If these results were constant, they might be regarded as a reasonable proof that the delirium was often symptomatic of a disordered condition of the alimentary canal, but it is not so. In my experience, vomiting has not usually preceded the delirium, and, when it has occurred after it, it has not seemed to exercise any curative influence over the disease; and certainly you will see patients who have been bled and blistered, purged and antimonialised, without being cured of their delirium, which has afterwards yielded to opium; but in those cases where more than one organ is destroyed, it may be that the delirium tremens is not the most urgent symptom; and we may be obliged to bleed, or employ some other active treatment, although we believe that the delirium may for the moment be aggravated by it.

It may now be expected that I should enable you to say whether a case before you be delirium tremens or not. It may be the delirium of fever, of inflammation of the brain, or of insanity. How are you to distinguish between them? The fact that the disease has succeeded to intoxication would not alone justify us in calling it delirium tremens. It is not enough to say that the differences are mainly in degree, though it is certain that between delirium tremens and phrenitis there is usually a well-marked distinction in the state of the pulse, in that of the skin, and in the tremor. The circumstances of the case will usually enable us to determine whether it be the delirium of fever or not; and the hurried manner, the loquacity, the constant desire to be moving, of delirium tremens will help us still farther. From maniacal insanity the disease is usually distinguished by the softness of the pulse, the clammy and profuse perspiration, and the unceasing tremor. These circumstances, together with the history of the case, will usually leave us little doubt as to the nature of the disease.

In the treatment of this very formidable derangement of the nervous system, a very broad rule of practice has commonly been laid down—the exhibition of opium and cathartics; and it has been said further, that, under whatever form opium is administered, it is equally efficacious,—that it should usually be given in large doses until sleep is procured, and that the nervous agitation will soon disappear. You have seen us follow that plan in the cases now in the hospital, and with the most complete success; and it is for the purpose of putting you on your guard against the universal applicability of the remedy that I have thought it desirable to offer you some observations upon the subject to-day. Every case of delirium tremens is not to be cured by opium, or we should not have nearly 250 deaths annually from this cause alone; neither would Klapp have advocated the exclusive virtues of tartar emetic, nor others that of blood-letting or cathartics.

It is true that simple uncomplicated nervous delirium,—the disease which so commonly supervenes in a person accustomed to over-stimulation, but in whom forced abstinence has become necessary, in consequence of violent injuries or other cause,—the delirium which is often preceded by muscular debility and sleeplessness,—by weight and pain of the head, but which at other times is manifested in full activity without any evident precursory symptoms, and in which, whether mild or furious, the patient is usually able to recognise those around him,—able also to answer questions correctly, but in which the attention cannot be sustained, the patient immediately relapsing into his former condition,—and in some cases characterised by immoveable silence,—in others by inexhaustible loquacity,—may exist without complication of disease of the brain or of the stomach, and it will almost always yield to opium properly administered: in some cases by the stomach,—in others by the rectum; but even in these cases its effects will usually be much more decided if associated with some stimulus. Thus, if a man has been accustomed to drink largely of malt liquor, a drachm of laudanum will act much more beneficially if taken in a pint or a pot of beer than if taken alone. A similar remark may be applied to spirituous liquors; and in other cases its effects would be most certainly enhanced if it were as soon as practicable associated with animal food.

But all cases of delirium tremens are not thus simple. To the delirium is added disorder of some important organ—the brain or the stomach, for instance, and opium is no longer an unfailing remedy. In such cases it is that the other plans of treatment to which we have alluded may be employed most beneficially, and in which a blind routine use of opium may be most objectionable, however proper it may be where the delirium is uncomplicated. If a patient's face be flushed,—if his head be painful, his pulse be hard and full, the light be offensive to his eyes, and the noise to his ears, —we shall then suspect that the brain is disordered beyond the point where delirium is manifested, and means appropriate to that condition must be employed: it will, in all probability, not yield to opium. In such a case it may be proper to associate with opium blood-letting, blistering, mercury, or tartar emetic. Again, if the tongue be deeply coated, and the bowels obstinately costive, the tartar emetic and cathartic plan would seem to be indicated.

Under ordinary circumstances, where no obvious complication exists, it is well, first, to get complete evacuations of the stomach and intestines; then the action of opium will be more decided. You should begin with a full dose, according to circumstances, two, three, four, or five, grains of opium, associated or not with camphor, or other stimulant; to be followed by one and a half or two grains every second hour, until a long sleep is procured. From this sleep the patient will often awake almost, if not altogether, convalescent. In other cases, although the improvement is considerable, the affection is not wholly subdued, and it is unsafe to intermit the opium, but it may be given in diminished doses, associated with food and stimulating fluid, until all delirium ceases; but, under any circumstances, it is well to resort to animal food and the necessary stimuli as soon as possible.

CONVERTS TO HOMŒOPATHY.

The Homœopathists boast that, among the members of the Homœopathic Association, they now have the first logician, and, perhaps, the most profound thinker, of the age—Archbishop Whately. They think this is a sufficient answer to those who shew the "fallacies" of the Homœopathic "faculty" by reasoning. Admitting the statement to be correct, it appears to us to be only another proof how easily a clever man may be misled upon subjects with which he can only be imperfectly acquainted, and regarding which he can have no experience whatever. Men should examine things not only by the power of ratiocination, but by the light of common sense. Descartes was a skilful logician; but he was inclined to disbelieve in his own existence, unless he could assign a reason for it; this reason, as dialecticians know, was, "*cogito, ergo sum*;" but so far as proof by ratiocination was concerned, he might as well have said, "*sum, ergo cogito*." An ignorant country boor would take his existence for granted, and thus shew greater wisdom than the logical Descartes. If it be true that Archbishop Whately is a convert to one of the most preposterous and illogical systems of *quasi* medical practice that has ever been devised, it is a sufficient proof to us that he has not brought his logic to bear upon the subjects.

Powerful reasoners, in all ages, have still their prejudices, against which their own logical acumen, as displayed on other subjects, has entirely failed to protect them. Even the illustrious Bacon, who unfolded the true method of studying nature and her laws, *believed in the existence of* witchcraft!

Original Communications.

A CASE OF

FRACTURE OF THE CRANIUM, WITH DEPRESSION AND SUBSEQUENT HERNIA CEREBRI.

By George Harvey, Esq. Surgeon.

On Tuesday, June 30th, about midnight, I was summoned to attend William Cancell, an agricultural labourer, aged 30, who had been kicked by a horse. I found him stupidly drunk, and I considered the stupor to arise from drink, because he replied to questions unwillingly, and in a sulky manner, and made great objections to his hair being cut close, which was necessary in order to examine an injury on his head. This injury was a small wound in the scalp, about half an inch long, just above the left ear. As this wound did not appear to penetrate through the scalp, and he was in a very sulky mood, I merely applied a superficial dressing, and sent him to bed; he very methodically took off his shoes, and, with the assistance of a man to lead him, walked up stairs.

July 1st.—Slept pretty well; answers questions very readily, and complains of pain on the left side of his head. Being in an inconvenient dark room, I requested to have him removed; he directly arose, and walked into a front room, but staggered a good deal. Pulse 70; pupils natural; bowels confined; was sick last night. On examining the head, I found the scalp swollen, and a coagulum filling up the wound: on removing this with a sponge, a small quantity of brain escaped. I immediately made an incision down to the bone in the form of an inverted T, and exposed a fracture extending through the anterior inferior angle of the parietal bone, and depressed to the full extent of the thickness of the bone; but as he was sensible, the pupils natural, and the pulse firm and regular, I hesitated about trephining. My partner, Mr. Seymour, being from home, I requested the assistance of my friends Mr. Fitch, of Sible Hedingham, and Mr. Mason, of Sudbury. On consultation, we resolved to do nothing more than take twenty or thirty ounces of blood from the arm, and give calomel gr. v. immediately, and repeat it at bed-time.—Diet, tea and gruel; to be kept still, and the chamber darkened. Wet lint to the wound.

2d.—Very comfortable; bowels freely moved by the calomel.—℞ Liq. Ammon. Acet. ℥j.; Sp. Æth. Nitric. ʒij.; Mist. Camphoræ, ℥vj. sumat cochl. ij. 4tis horis. Calomel gr. v. hora somni.

3d.—Much as yesterday.—Perstet.

4th.—Still very comfortable.—Rep. Mist.; omit Calomel.

5th.—Passed a restless night, a considerable quantity of brain protruding. Still sensible, but articulates with difficulty, and very indistinctly. Pulse slow; pupil of left eye dilated, and nearly insensible to light; that of the right more natural; bowels not opened since yesterday morning. I now determined to raise the depressed bone, and, with the trephine, removed a small piece of the edge of the parietal bone, which enabled me to get an elevator under the depressed portion, a large irregular-shaped piece, the lower corner of which was driven through the dura mater. The whole of this, and several small splinters, I easily removed, laid down the flaps, and dressed the wound as before with wet lint.—Calomel, gr. v.; Jalap, gr. x. at bed-time. The left pupil immediately contracted.—Head to be covered with wet rags.

6th.—Much better than I expected; has passed a comfortable night; bowels relieved three times; pulse 78; mouth affected with the calomel; quite sensible, and answers to questions with yes or no correctly, but cannot pronounce longer words intelligibly, although he endeavours to do so; a portion of brain, about the size of a chesnut, protruding through the wound. —Omit Calomel; continue the mixture. Wet lint to the wound.

7th.—Passed a restless night; bowels not moved; takes tea and gruel; wound looks well; pulse 80.—Rep. Calom. and Jalap. hora somni; cont. mistura.

8th.—Better to-day; bowels relieved several times; wound looks healthy; hernia cerebri not increased; pronunciation still indistinct, but answers yes and no correctly.—Continue the mixture, and Calomel and Jalap.

9th.—Much as yesterday.—Pergat.

10th.—Looks better to-day; bowels open; mouth very sore; wound looks well; pulse 80; articulation the same; sleeps quietly, and takes his tea and gruel readily.—Omitt. Calom. et Jalap. Rep. Mist.

11th.—Still improving; wound granulating, and discharges copiously; the portion of bone where the trephine was applied looks dead, but is not loose; bowels not moved since yesterday; mouth very sore; articulates rather more distinctly.—Rep. Calom. et Jalap. hora somni.

12th.—Wound looks well; hernia cerebri beginning to slough; speech improved. Did not take the calomel last night, the bowels having been copiously relieved.

13th—Much better to-day; wound granulating; protruded portion of brain loose, but not quite disengaged; discharge healthy; pulsation of the arteries of the brain very perceptibly moving the protrusion. Gave very strict orders forbidding any other diet than tea-sop, and especially forbidding beer, of which he is desirous, stating the danger of fatal hæmorrhage, to ensure obedience; to sit up, carefully supported, to-morrow, whilst his bed is made. Bowels open; pulse 84.—Rep. Mistura; Omit. Calom. and Jalap.

14th.—A sudden hæmorrhage from the wound, though to a very small amount, during a fit of coughing. Mr. Seymour attended in my absence, but the bleeding had ceased before he arrived. I visited him between 7 and 8 in the evening. No further hæmorrhage; wound looks well; slough not separated; bleeding probably caused by the partial separation of the slough; however, I kept everything as quiet as possible, and dressed the wound very lightly with a wet rag. Pulse 84; bowels open; speaks tolerably distinct. —V. S. ad ℥xij.; rep. Mistura.

15th, 5 A.M.—Suddenly summoned on account of returning hæmorrhage, not more than two ounces; a small coagulum in the lower part of the wound; this I removed, hoping to detect the bleeding vessel; this coagulum was not attached to, or lying under the slough, but connected by a small thread of fibrine to the original wound in the scalp at its anterior and inferior extremity: most likely the hæmorrhage proceeded from the frontal branch of the temporal artery. The bleeding had ceased, but to prevent any return

I cut down upon the artery immediately above the zygoma, and secured it with a ligature. Wound looks well, and the patient is in every way improving; bowels not moved yesterday.—Rep. Calom. et Jalap statim; gave strict injunctions respecting quiet and abstinence.

16th.—No return of hæmorrhage; sloughing portion of brain protrudes more every day, but is not inclined to separate; in other respects wound looks well. I suppose nature is repairing the injury in her own way, and, as she does not at present seem to require assistance, I shall not interfere, lest I should do mischief. He speaks more intelligibly to-day.—Rep. Mist.; allowed a little broth.

17th.—Much the same; bowels not moved.—Rep. Calom.

18th.—Wound of the scalp granulating rapidly; hernia cerebri not increased, its base uniting by granulations to the inside of the anterior portion of the scalp; the upper part, although apparently dead, is not separating; discharge very offensive; but a small quantity of healthy pus is discharged from beneath the protruded brain. Touched the granulations with Argent. Nitrat.; dressed with dry lint; bowels open; chloride of lime sprinkled in the room to correct fœtor.

19th.—Granulations increasing, so as closely to embrace, and partly overlap, the protruded brain, which is dead on the surface only, and does not increase in size; a very slight oozing of blood from a point on the summit. This I touched with Argent. Nitrat., when the oozing ceased; his general health seems good; he wishes to have more food, and to be allowed to get up. This I have forbidden; but allowed him a potato in addition to his broth. He goes on so well that I am unwilling to interfere with the hernia cerebri. I once saw the pressure of a roller applied in a similar case by the late Mr. Headington: but the patient became comatose, and died. I also saw Sir William Blizard cut off the whole mass even with the skull, and then apply a compress and bandage, but with no better success.

20th.—Hernia cerebri considerably increased; speech more defective; complains of great pain in the head, particularly about the left ear; *right arm slightly paralyzed; granulations still* look healthy.—Rep. Calom. et Jalap. hora somni; dressed as before.

21st.—Hernia cerebri increased since yesterday, covering the granulations, and completely filling the wound; paralysis not increased; no pain; bowels opened three times. — Rep. Mistura; dressed as usual.

22d.—Had a convulsive attack about four o'clock this morning, since which his articulation has been more defective; complains of pain in the head; hernia cerebri increased since yesterday, the anterior part granulating firmly, and adhering to the inner surface of the scalp; the part lately protruded black, and sloughy on the surface; no motion; pulse 90.—Rep. Calom. et Jalap. Venæsectio ad ℥xij.; dressed so as to support and slightly compress the protruded brain.

23d.—Says he is better to-day; but is reported to have had a slight convulsive attack at four o'clock this morning; speaks more distinctly; paralysis better; bowels moved three times; hernia cerebri not increased; countenance rather pale; pulse 90.—Dressed with slight compression. Rep. Mistura. To have tea and gruel, but no broth.

24th.—Considers himself much better; slept well, and had no convulsive attack on waking; protrusion not increased; it is now about the size of a large hen's egg, black, and sloughy on the surface; very little pain; no motion. Dressed as before, with slight compression, which he says is very comfortable.—Rep. Calom. et Jalap.

25th.—Mr. Fitch visited him with me to-day; he has passed a good night, but, on awaking, had another convulsive attack; but he considers himself better; pulse 90, and soft; tongue clean; bowels relieved twice; protrusion much as yesterday; answers yes and no correctly, but cannot articulate the names of persons.—Pergat.

26th.—No pain or increase of protrusion; the discharge has for the last three days been very watery; scarcely any purulent matter; protrusion granulating; bowels open; slept well, and awoke refreshed; pulse 80, and weak. —To have a boiled egg in addition to his gruel and tea. Rep. Mistura; dressed as before.

27th.—Very comfortable; a great portion of slough from the surface of protrusion separated to-day; the part looks better since dressed with compression. The dressing to-day consists of strips of adhesive plaster, covered with a pledget of cotton wool, commonly called "wadding," the whole confined by a narrow flannel roller; the discharge is still watery, and very offensive, but some healthy pus from near the temple; bowels not open; paralysis better; articulates with difficulty; pulse 90, and stronger. Enjoyed his egg yesterday; to have another to-day. —Rep. Cal. et Jalap. h. s.

28th.—Improving; no pain; protrusion granulating; increased the pressure by applying a strip of isinglass plaster around it, and cross straps over the summit; the wadding and roller as yesterday. Paralysis evidently less; articulates with difficulty, apparently from defective memory: for instance, a pocket-knife was presented to him; on inquiring if he could see it, and knew what it was? he readily answered, "Yes, sir." On being required to name it, he replied, "I can't speak it." When asked why? he said, "I don't know." A spoon was presented to him: when asked what it was, he replied as before, "I can't speak it." When asked if it was a spoon, he instantly repeated the word "spoon." Bowels acted three times yesterday; pulse 90; enjoys his egg; to have another to day, and some mutton broth instead of gruel; has lost flesh rapidly during the last week; therefore I have ventured on a little better diet, strictly forbidding beer, wine, &c. &c.; and have reason to believe my injunctions are obeyed. Applying pressure directly to the brain may, at first sight, appear very objectionable; but, in the present case, it must be considered that the brain has escaped from the cavity of the cranium in consequence of having lost its natural support from the skull and dura mater, and that every pulsation of the arteries tends to force the soft cerebral mass more and more through the opening in the bone; therefore a moderately firm pressure, increased gradually, will, I hope, not only prevent a greater protrusion, but tend to restrain the too luxuriant growth of the granulations, and that without producing any of the usual effects of pressure on the brain when confined within its bony case (*vide* Abernethy's Surgical Works, *vol. ii.* page 66, note).

29th.—Much as yesterday; pulse 84, rather weak; protrusion so much decreased, that one of his friends inquired whether "it was wasted, or gone back into the skull." Dressed as before.—℞ Bibirinæ Sulph. gr. xij.; Sacchari, ʒss.; Sp. Pimento, ℥ss.; Aquæ, ʒxj. M. Sumat cyathum ter quotidie. Diet, broth, egg, and calf's foot jelly.

31st.—Has suffered no inconvenience from the pressure of the dressings; protrusion not increased; the slough has entirely separated from its surface, leaving a clean red mass of a firm consistence, in no way resembling brain, but very similar to the fungoid mass found, in lieu of brain, in an acephalous fœtus. On detaching a small portion, about the size of a hemp-seed, which projected from its outer edge, the pain caused him to cry out, and the part bled freely for a few seconds, but the application of a small piece of lint arrested the hæmorrhage; this mass is undoubtedly brain, but brain so altered in its character that, were it in my power, I should not venture to return it into the cranium. Mr. Abernethy recommends removing a hernia cerebri by the knife, and clearing away the coagulated blood from the cavity beneath, when the hæmorrhage, he affirms, will cease, and the wound heal by granulations; but this is on the supposition that the protrusion has been caused by a wounded artery pouring out its blood into the brain, which blood not being able to find an exit, forces the brain before it out at the aperture made by the trephine (vide Mr. Abernethy's Surgical Works, vol. ii. page 63): but in the present case, if internal hæmorrhage has existed from the protrusion not having increased, but rather diminished for several days, I am inclined to believe that the hæmorrhage has ceased, or rather that no hæmorrhage has ever taken place, but that the brain has been forced through the wound solely by the pulsation of the arteries, and that the protrusion would have been altogether prevented had I used pressure in my first dressings after the removal of the depressed bone. What has caused the protrusion to assume the character of a fungus? Is it caused by the pressure of the dressings confining it close upon the exterior of the skull without compressing any part of the brain in its cavity? As a proof that the pressure has not been injurious, he has been daily improving since the 22d, when slight pressure was first applied. He speaks more distinctly to-day, and the paralysis has almost ceased; he raised his arm, and clenched his fist with considerable firmness; healthy pus discharged from beneath the protrusion; dressed as before; pulse 80, and stronger. —Continue the Mist. Bibirinæ; omit the Calomel; diet as yesterday. Ate a small piece of bread and cheese with great relish.

[To be continued.]

AMPUTATION FOR FUNGOID DISEASE, OF THE ARM OF AN INSANE PATIENT.

SECONDARY HÆMORRHAGE FROM THE BRACHIAL ARTERY ON THE SIXTEENTH DAY, INDUCED BY EPILEPTIC CONVULSIONS, SUCCESSFULLY TREATED BY COMPRESSION APPLIED AT THE EXTREMITY OF THE VESSEL.

By Daniel Fletcher Tyerman, Surgeon,
Medical Superintendent of the Cornwall Lunatic Asylum.

Before entering circumstantially into the details of this case, I deem it advisable to premise (with a view to guard against the indiscriminate adoption of similar practice) that on examination of the bleeding stump, I found a fistulous canal, surrounded by firmly organized adhesive deposit, in immediate connection or continuity with the ruptured vessel, affording me the facility of making direct pressure upon its extremity, and favouring the retention of the compress until it was sealed by fresh granulation.

W. J., æt. 38, a powerful and very muscular man of colour, by occupation a luggage-porter, came under my care as an insane epileptic, March 25, 1844, supposed to have been long prone to epilepsy, which gradually led to insanity of the monomaniacal form, accompanied with tendency to dangerous violence.

I found the tongue furred, the general tone of system moderate, and the appetite good; the bowels torpid; extravagant delusions were expressed. I directed occasional mercurial purgatives, followed by castor-oil, the frequent use of the warm bath, with cold affusion to the head, &c. During the remainder of the year frequent convulsions occurred, usually in the night, and dangerous violence, occasonally requiring strict control, was from time to time exhibited.

1845.—At the commencement of the following year he betrayed more determined propensity to violence, and frequently struck others without the least provocation. Epilepsy recurred chiefly during the night. Various measures were adopted, with partial relief—as antispasmodics of castor and assafœtida with ammonia, mineral tonics and alteratives, small doses of tartar emetic, vegetable tonics, &c. The general health was, however, improved, and the tongue less habitually furred.

1846.—In April of the present year, his mental and general physical condition being unchanged, he complained of pain in the neighbourhood of the elbow of the right arm, with tumor about the joint, which, by the end of July, assumed an irregular lobulated form.

On August 3d, with the patient's willing concurrence, I amputated at a moderate distance above the elbow, adopting the double flap operation. The edges of the wound were brought into contact by a roller and adhesive plaster.

On dissection of the limb, the fungoid growth was found radiating from the extremities of the bones forming the articulation.

4th.—On the second day there was occasional severe spasm in the stump, with complaint of pain in the head, but no epileptic convulsion had occurred.

5th.—On the third day an epileptic fit occurred in the morning, and great care was necessary to prevent injury of the stump. The patient scarcely complained of any uneasiness in the head.

7th.—On the fifth day the stump was dressed, the wound found healthy, and its edges in fair, but not close apposition.

8th.—On the following morning a most violent and prolonged epileptic fit occurred; the muscles of the stump were powerfully convulsed, and some blood afterwards oozed from the granulations of the wound. Bowels open. Antispasmodics prescribed, which the patient refused to take.

9th.—On the seventh day the process of union was found to be entirely interrupted, the flaps of the wound torn open, and the adhesive deposit broken down. Convulsions had again recurred.

10th.—The fits continued on the following day, and in the evening, the pulse being full and quickened, and the bowels torpid, he took—Calomel, gr. iij.; Pulv. Rhæi, gr. xv.; followed by a saline febrifuge mixture. Poultice to the stump.

11th.—On the ninth day a fit occurred in the morning, followed by slight oozing of blood from the granulations of the wound, which had a greenish sloughy appearance. After three days, however, it assumed a healthy aspect, and the main ligature alone remained. Slight fits continued, but no fever or constitutional irritation whatever (beyond the epilepsy) resulted. Bowels kept open by occasional calomel purgatives. The edges of the wound supported by a bandage and adhesive plaster; an occasional poultice and Lotio Chlorid. Sodæ being applied.

16th.—Fits did not recur on the thirteenth and fourteenth days, and the wound was granulating healthily; but in the night following severe convulsions set in, and on the next day the wound was found much disturbed, its healthy appearance greatly modified, and some blood had oozed from the new vessels of the adhesive deposit. The ligature of the brachial artery came away with the dressings, having separated without hæmorrhage.

18th.—This evening (sixteenth day), the patient being tranquil and unaware of the circumstance, arterial blood was seen by the attendant flowing abundantly between the dressings. On my arrival, I found that a large quantity, four or five pounds or more, had escaped, deluging the bed, and a copious arterial jet was still propelled by the side of the dressings.

Having made pressure and adapted the tourniquet, I removed the dressings, and ascertained that the stream proceeded from a fistulous orifice the size of a large quill. Into this I immediately passed, on the point of a catheter, a portion of lint to the distance of an inch or more in the direction of the artery, pressing up with moderate firmness folds of the lint, and placed a thick dossil, supported by adhesive plaster, over all. I then made preparations for cutting down on the brachial artery below the axilla, but observing the hæmorrhage to be completely arrested, I determined to delay this step, holding myself in readiness should it become necessary. On moving the patient afterwards, faintness and a weak epileptic paroxysm occurred.

20th.—By the evening of the 20th (48 hours after the rupture of the artery) there was neither return of hæmorrhage or epilepsy; the patient was cheerful, and made no complaint whatever of pain. The tourniquet was loosely retained.

21st.—On the next day (62 hours after the occurrence of hæmorrhage) the stump was dressed. The plug of lint was found forced to the surface by new granulations and deposit, and came away with the dressings. The wound was looking very favourable, healthy pus being secreted. There was no irritative fever whatever, or return of the convulsions. The tourniquet ordered to be tightened in the event of a fit, in order to check the impetus of the circulation through the artery.

22d.—No unfavourable symptom whatever, and the wound is healing.

24th.—An epileptic fit occurred today, inducing slight oozing of blood from the granulations.

25th.—A fit has occurred without appearance of blood on the dressings. The tongue is clean, and bowels moderately open; the pulse rather quick, having still the hæmorrhagic character.

28th.—Severe convulsions were repeated last night, inducing slight oozing of blood from the granulations, and impeding the process of cicatrization.

Sept. 4th.—Excepting epilepsy, there is no unfavourable symptom, and the healing of the wound, which is now small and unimportant, proceeds favourably.

Oct. 26th.—Owing to accidental bruising of the stump during the convulsions, the perfect cicatrization of the wound has been retarded to this date.

Unfortunately fungoid disease is developing itself at the lower extremities of the bones of the left forearm. The patient enjoys, however, moderate health; he rests well, takes exercise, and his appetite is good. Delusive and vague language is frequently used, but his general tone of moral feeling is of a healthy character, combining resignation to his sufferings with warm acknowledgment of the attention of those around him.

OBSERVATIONS.—During the epileptic paroxysms the muscles of the stump were invariably thrown into powerfully spasmodic and rapid movements, which the careful pressure of the hand of an attendant, assisted by the roller, scarcely controlled, and notwithstanding the adoption of unremitting vigilance, the stump was either suddenly drawn upwards, or brought into contact with the patient's head and face. Latterly a broad bandage passed over the shoulder, and fastened beneath the bed, somewhat lessened these evils.

The immunity from epilepsy for nearly six days after the occurrence of the hæmorrhage was, relatively to the patient's usual state, a morbid condition resulting from copious loss of blood, whereby the cerebral and spinal congestions were temporarily relieved, and the impetus of the circulation checked (a facility for the sealing of the ruptured vessel being thus also afforded), but on recovery of the circulation and tone of the system convulsions again set in, and still continue a feature of the patient's comparative health.

PRESENCE OF LEECHES IN THE FOUNTAINS OF ALGERIA.

From some interesting observations recently communicated by Dr. Trolliet, principal physician of the Civil Hospital at Algiers, it appears that many of the fountains of Algeria swarm with a small kind of leech, numbers of which are frequently swallowed accidentally by men and animals drinking at these fountains. Occasionally these creatures attach themselves to the back of the pharynx, to the velum palati, or the epiglottis, where they gorge themselves with blood, until they often acquire the size of a medicinal leech. The latter situation is the most dangerous, and Dr. Trolliet records cases in which considerable hæmorrhage, impending suffocation, and even death, has resulted from their presence there. Sometimes they are ejected by vomiting. When they fix themselves to the mouth and fauces, it is tolerably easy to seize and remove them; but when they get into the pharynx, or attach themselves to the epiglottis, it is almost impossible to get hold of them, and they often remain a considerable time, causing considerable hæmorrhage, which may prove fatal, or give rise to so much irritation as as to produce phthisis. Their presence on the epiglottis is frequently made known by a constant hæmorrhage from that part, by paroxysms of cough, alteration of the voice, a feeling of suffocation, and the sensation of a foreign body in the pharynx.—*Journ. de Médecine et de Chirurg.* Oct. 1846.

SOME REMARKS ON

ALKALESCENT URINE AND PHOSPHATIC CALCULI.*

By John Snow, M.D.

Lecturer on Forensic Medicine at the Medical School, Aldersgate Street.

Case in which a small quantity of urine remaining constantly in the bladder caused the decomposition of all that was secreted—experiments to shew that a very small quantity will have this effect—the bladder cannot be completely emptied of urine when it contains a foreign body; this is the reason why it becomes incrusted with the phosphates, and why these salts form the chief part of so many calculi—cause of alkalescent urine in injuries of the spine, extreme old age, &c.—necessity of injecting the bladder with warm water in most cases of alkaline urine—benefit to be expected from this practice in stone in the bladder.

In a state of health the urine is generally slightly acid; it may, however, be for a short time neutral, or slightly alkaline, from articles of food or drink which contain potash or soda in combination with a vegetable acid—as apples, pears, grapes, &c., and saline draughts made with the citrates, tartrates, or acetates; the vegetable acid is digested, and the alkali passes into the urine. This condition of the secretion, however, is but temporary, and when the urine is strongly alkaline, or remains alkaline for days together, this must be looked on as a departure from the physiological condition.

When healthy urine is allowed to remain in a vessel, it is well known that it becomes alkalescent from decomposition; the urea it contains becoming changed into carbonate of ammonia. In paralysis of the bladder, when it remains constantly distended, and the urine dribbles away to make room for what is secreted, it is known to become offensive and ammoniacal. The same change of the urine takes place also in some cases of paraplegia, of enlarged prostate, and of stricture, when the bladder remains full for some time.

In the latter part of 1842, I had a patient suffering from incontinence of urine after a very tedious labour: when

---

* Read at the Westminster Medical Society, Nov. 9, 1846.

I was applied to about the circumstance, I found the urine very ammoniacal, and containing a good deal of phosphate of lime in a state like mortar, the patient suffering much from excoriation of the genital organs. On introducing a catheter I found that about a table-spoonful of urine remained constantly in the bladder. After this viscus had been injected with warm water, the urine which flowed all the remainder of the day was free from alkalescence, and tolerably healthy. Here was a case, then, in which the continuance of about half an ounce of urine in the bladder caused the decomposition of all that passed through it. In order to see the bearing of this circumstance on a number of cases in which the bladder cannot be completely emptied, including, as I shall presently show, stone in the bladder, it became desirable to ascertain if a still smaller quantity remaining in that organ might not have a similar effect. With this view I performed experiments in the following manner. About half a pint of newly-voided urine was put into a glass vessel which terminated at the lower part in a tube of minute calibre, through which it dropped into a glass jar below, at the rate of about twelve drops in a minute, which is about an ounce and a half in an hour, that being not far from the quantity usually passing into the bladder from the ureters. The vessels were kept near the fire at the temperature of 100°. At the end of six or eight hours, when the urine had all dropped into the lower vessel, it was emptied, all but about thirty drops, and the upper glass, which served as a funnel, again replenished. It was found that the urine in the lower vessel became decomposed generally in about twenty-four hours—in about the same time, in short, as urine preserved at the same temperature from the beginning of the experiment, the time varying according to the quality of the urine. It generally became quite fœtid in two or three days, at all events highly alkalescent, and remained so as long as the experiment was continued, always fresh and acid in the upper vessel, provided it was washed out occasionally, and always decomposed in the lower one, although the urine, except a small fraction of it, was of the same age in both.

It is well known that an alkalescent state of the urine, and a deposition of the phosphates, usually coexist. The decomposition of urine, whether it takes place in or out of the bladder, is accompanied by the precipitation of the earthy phosphates. The ammonia resulting from the decomposition of the urea and animal matter of the urine combines with the phosphate of magnesia naturally present in solution to form the insoluble triple phosphate; it also combines with part of the phosphoric acid, which holds the lime in solution as a superphosphate, leaving a neutral phosphate of lime, which is insoluble. I have observed that minute crystals of triple phosphate very often begin to appear, as a delicate cloud, in urine that is kept before it has lost the property of reddening litmus. This observation I consider of importance, as it shews that the presence of these minute crystals in acid urine at the moment it is voided does not necessarily depend on an excess of phosphates. When the decomposition of the urine takes place to any great extent in the bladder, so that it becomes strongly ammoniacal, it irritates the mucous membrane, and causes it to secrete a quantity of phosphate of lime, or of phosphate and carbonate of lime, mixed with the mucus; this comes away with the urine, if there is no calculus or other foreign body in the bladder to which it may adhere. In the case of incontinence of urine to which I have alluded, the mucous membrane of the upper part of the vagina also secreted a quantity of phosphate of lime, apparently from the irritation of ammoniacal urine coming in contact with it. Dr. Chowne examined this patient with me.

When there is nothing to interfere with the healthy function of the bladder, it completely empties itself at intervals of a few hours by a vigorous contraction; and if we examine into the various circumstances which may prevent the complete emptying of the bladder, we shall find that they are all liable to be followed by an alkalescent state of the urine and deposit of phosphates. We will take, first, the instances of foreign bodies in the bladder. One of the symptoms of their presence is the occasional sudden stoppage of the stream of urine before the bladder is emptied; in addition to this, it is evident that the bladder can seldom contract around a foreign body so exactly as completely to expel all the urine; and moreover, calculi, and nearly all other foreign bodies which gain admittance to the bladder, are porous, and contain urine imprisoned in their pores; accordingly it is a general law, with extremely few exceptions, that foreign bodies in the bladder become incrusted with the earthy phosphates. The usual explanation of this phenomenon, in which Dr. Prout, Sir B. Brodie, and others, agree, is that the foreign body causes chronic inflammation of the bladder, accompanied with a secretion of alkaline mucus which decomposes the urine: but a pea, or a bit of fibrine, or any other substance not of a nature to cause even irritation, is as certain to form the nucleus of a phosphatic calculus as the most hard and angular; and in most recorded cases there has been a total absence of symptoms of chronic inflammation at the time a foreign body was becoming incrusted; consequently, whilst I am ready to admit that the usual explanation may be true in some cases, and may act as a secondary or an auxiliary cause in others, there can be no doubt that the explanation now given is the correct one for most instances, as it shews a physical cause which can scarcely fail to be in operation. Vesical calculi are themselves foreign bodies, and consequently we find that every calculus, whatsoever its nature, is liable to become incrusted with the earthy phosphates; even the strongly acid state of the urine which usually prevails where there is uric acid calculus being generally overcome; whilst, on the other hand, the phosphatic incrustation is scarcely ever covered with any other deposit, but goes on increasing, the phosphatic deposition, when once it has commenced, being a cause of its own continuance. Mr. Taylor only alludes, in the Catalogue of the Calculi in the College of Surgeons, to two phosphatic calculi which became covered by another deposit, one in the museum of the College, in which the secondary deposit is oxalate of lime, and the other in the museum of St. Bartholomew's Hospital, in which it is uric acid.

When a catheter is introduced, if the bladder is not paralysed, it will contract as the urine flows, and be completely emptied, or nearly so; but if the catheter is left in the bladder, this viscus does not of course continue constantly in a state of active contraction, but is collapsed, and no doubt allows a small quantity of urine to remain in it, more or less, according to the position of the patient and the catheter: consequently we find that a catheter can seldom be left for two or three days in the bladder without inducing an alkalescent state of the urine, and becoming incrusted with the phosphates.

Dr. Prout, Sir B. Brodie, and numerous observers since, have remarked that injuries of the spine are liable to be followed by alkaline urine. This has usually been thought to depend on an altered secretion by the kidneys, arising from impaired nervous influence; it has been found, however, in various cases of disease and injury of the spine, that the urine, although alkaline in the bladder, is acid when first secreted by the kidneys. Dr. Golding Bird* accounts for this change by supposing that the healthy bladder preserves its contents from decomposition by its vital endowments, and that this property of the bladder is impaired by injuries and other affections of the spine; and Mr. Curling † supposes that, when the bladder loses its sensibility from spinal lesion, it begins to secrete unhealthy alkaline mucus, which decomposes the urine. Now I have observed that healthy urine will keep fresh out of the body at blood-heat as long as it ever remains fresh in the bladder; and, with respect to the change in the mucus, there is every reason to believe that in these cases it is the consequence, and not the cause, of the alkalescence of the urine. Since the experiments I have related, we are in a position to give a more satisfactory explanation, and one which fortunately suggests a remedy of easy application. The explanation is, that the detrusor urinæ, like other muscles, is liable to various degrees of loss of power, besides total paralysis; and that, when it is weakened, along with the other muscles, by injury or disease of the spine, it can empty the bladder in a great measure, but cannot contract in that vigorous and complete manner necessary to expel the last drops of urine; and that thus a source of the decomposition exists. It is not improbable that, when the bladder is long occupied by highly alkalescent urine, the decomposition may be propagated in course of time in a retrograde manner along the ureters to the kidneys, and ultimately destroy the patient. This seems the best solution of certain cases in which phosphatic calculous matter is found in the pelvis of the kidney after death in persons who have suffered from injury or disease of the spine.

---

* MED. GAZ. vol. xxxii. page 10; and Urinary Deposits, 2d edition, p. 222.

† Ibid. vol. xiii. p. 76.

Dr. Prout* has taught us that a state of great nervous irritability and depression is characteristic of the phosphatic diathesis, and leads to the secretion of alkaline urine by the kidneys. Now I have observed that an alkalescent state of the urine kept up by a local cause in the bladder leads to great depression and debility; and it is not improbable that general nervous and muscular debility may be a cause of alkaline urine by preventing the proper emptying of the bladder; consequently, whilst I do not dispute the existence of the phosphatic diathesis in the proper sense of the term—viz. the secretion of the phosphates in excess by the kidneys—I am inclined to believe it rare. The urine is often alkalescent in the decrepitude of extreme old age. We can now perceive the reason, since the muscular tunic of the bladder must of course partake of the debility common to all the voluntary muscles.

Simon, of Berlin, has noticed an alkaline state of the urine in typhus, generally when comatose symptoms are setting in. Now, since sensation and volition, as regards the bladder, are often totally lost in typhus, it is almost certain that this organ must frequently suffer a partial loss of function, when, although still able to void the urine, it will not expel it completely. Under these circumstances the urine ought to be alkalescent in the bladder, and continue so till during convalescence the patient is able to empty the bladder properly.

The indications of treatment arising from these views of the subject are obviously to do for the bladder what it is incapacitated for doing of itself: to remove that little leaven of decomposition which alters the whole of the urine as fast as it flows into the bladder. The way to do this is to introduce a catheter, and inject warm water, to wash the bladder thoroughly out. The operation of injecting the bladder is, I believe, but little practised except in some states of disease of its mucous membrane; but I have no doubt it will be found the most efficacious treatment in nearly all cases of alkalescent urine. Mineral acids may be a very useful adjunct to this practice, but hitherto they have been far from successful in what has been called the phosphatic diathesis; and it is not to be expected that any quantity of acid, which can safely enter the circulation, and be separated by the kidneys, will be able to counteract such a powerful cause of phosphatic urine as I have pointed out. In the case of incontinence of urine to which I have alluded, the injection of the bladder, by removing the ammoniacal state of the urine, at once relieved the greater part of the patient's sufferings, and its repetition every day for a few weeks, until the bladder began to regain the power of retaining and expelling its contents, preserved the urine in a pretty healthy condition, and no doubt prevented inflammation, thickening, and contraction of the bladder, and perhaps spreading of disease to the kidneys. We may expect, at least, as much benefit in injuries of the spine, and numerous other cases; we may hope to prevent the formation of phosphatic calculi in many instances, and may reasonably expect to have a much greater power over vesical calculi of every kind than we have hitherto possessed without a serious operation. We may hope not merely to prevent their enlargement, but to get them to dissolve. Dr. Prout is of opinion—and there is every reason to believe it is a sound one — that healthy urine is the best solvent of all kinds of calculi which we can hope to possess; and washing out the bladder occasionally will undoubtedly be a great means of keeping the urine in a healthy state in cases of stone. The effect of injecting the bladder every day, or every other day, will be at once extremely beneficial on phosphatic calculi if the kidneys are secreting acid urine, as in most instances there is reason to believe they are; and the great difficulty in the treatment of uric acid calculi has always been, the danger of inducing an alkaline state of the urine, which we should be unable to remove, and of thus causing the stone to increase, by a deposition of phosphates, faster than it had increased before; but, since we know how easily such a condition can be removed under the circumstances, we can give Vichy water, citrate of potash, and other appropriate remedies for excess of uric acid, without fear.

---

* Stomach and Urinary Diseases.

54, Frith Street, Soho Square.
Nov. 9, 1846.

NATURE OF LICHEN, PRURIGO, AND IMPETIGO.

According to M. Cazenave, lichen and prurigo are nothing else than inflammatory affections of the nervous structure of the skin—a true hyperæsthesia, and the eruption is but an accident, for in many cases of prurigo there is no eruption at all. In accordance with this view, M. Cazenave treats lichen and prurigo with emollients and narcotics. Impetigo he considers to be an inflammatory affection of the lymphatics of the skin, and regards it as a mark of a scrofulous habit. It is frequently, he says, combined with glandular enlargement in the neck. In this, and all other scrofulous affections, he observes that iodide of potassium is absolutely useless.—*Gazette des Hôpitaux*, Sept. 3. 1846.

MEDICAL GAZETTE.

FRIDAY, NOV. 20, 1846.

Various circumstances have hitherto prevented us from noticing the Twelfth Annual Report of the Poor Law Commissioners. This Report contains but little to interest the profession in a medical point of view; the only subject which calls for especial notice is that which refers to the diffusion of vaccination.

We learn from the Report that the progress of vaccination during the year 1845 has been highly satisfactory, there having been 362,087 persons vaccinated, and the operation having proved successful in 347,765 cases, the successful cases being equal to 96 per cent. on the number vaccinated.

The following Table shews the numbers vaccinated, and the births in the unions from which returns have been received, for the years ended respectively 29th September, 1844, and 1845:—

Years.	No. of Unions and Parishes.	No. of Persons Vaccinated.	No. of Persons successfully Vaccinated.	No. of Registered Births.	Ratio of Persons Vaccinated to the No. of Births.	Ratio of Persons successfully Vaccinated to the No. of Births.
1844	542	290,453	278,192	452,235	100 in 156	100 in 163
1845	580	362,087	347,765	486,632	100 in 134	100 in 140

In order to ascertain whether the number of children vaccinated under one year of age approximated to the number of births, a form of return was framed so as to shew the number vaccinated under and above that age, and the numbers were as follows:—

——	Under One Year.	Above One Year.	Total.*
Vaccinated	154,031	204,242	362,087
Successfully vaccinated .	147,958	196,216	347,765

The number vaccinated under one year of age is 43 per cent. upon the total number vaccinated, and 32 per cent. upon the number of births.

In every union in which the number vaccinated under one year of age did not nearly approximate to the number of births, or in which a falling off had taken place in the number vaccinated as compared with the previous year, the Guardians of the Union were requested to call the attention of the vaccinators to the subject, and to urge upon them the importance of extending the practice of vaccination in their districts. Though the number of children vaccinated under one year of age is only 32 per cent. upon the number of births, the relation which the births bear to the number vaccinated is, in the opinion of the Commissioners, a tolerably correct measure of the efficiency of the arrangements for promoting the object of the Vaccination Extension Act, as, from the communications which they have received from boards of guardians and vaccinators, they learn that vaccination is very frequently deferred till the child attains its second or third year.

---

* These totals do not correspond, in consequence of the ages of the persons vaccinated not being distinguished in some of the returns.

During the past year small-pox has not prevailed to such an extent as it did in the year 1844, the deaths in the metropolis in 1845 being only 909, whilst in 1844 they were 1804.

The registrars of the 115 districts comprised in the quarterly tables of mortality published by the Registrar-General, are required, when the deaths are above the average, to state whether any epidemic disease has been prevailing in the districts, or if there be any other known circumstance which will account for the increase. The Commissioners are thus enabled to ascertain in what localities small-pox has recently been prevalent, and they then place themselves in communication with the boards of guardians of the unions in which the deaths occurred, and request that the public vaccinators may be instructed to use every means in their power to extend the practice of vaccination in their respective districts, and that the attention of the residents of the union may be especially directed to the arrangements which have been made for vaccination. At the same time, they feel bound to state that the boards of guardians and vaccinators generally, appear to be fully sensible of the importance of giving full effect to the provisions of the Vaccination Extension Act, and manifest great zeal in the extension of the practice of vaccination. The amount paid in fees to the vaccinators during the year ending 25th March, 1845, was £25,905, being an increase of £9025, or of 35 per cent., upon the amount paid in the previous year.

That part of the Report which refers to vaccination in Ireland is less circumstantial. All that we learn is, that the amount expended in vaccination during the first half year, in 108 Unions, was £1553. 3s. 11d.; during the second, in 112 Unions, £1813. 8s. 2d.

So far as the progress and diffusion of vaccination among the pauper population are concerned, this Report appears highly satisfactory. We purpose at another time to compare the facts with the deaths from small-pox recorded in the last Report of the Registrar-General.

We regret to find by reports which have reached us from various quarters, that the study of practical anatomy in this country is receiving a serious check, owing to a deficiency of subjects for dissection. In some schools this deficiency is so great, that all kinds of schemes are resorted to, in order to preserve from putrefaction, the very few bodies which are received. There can be no doubt that the working of the Anatomy Act,* has been, on the whole, highly injurious to the study of anatomy in this country; and the evil results of its operation are becoming in each session more and more apparent. The fact is, too much power is left by Clause vii. in the hands of parochial authorities and others in reference to the disposal of the unclaimed dead. Ignorance, vulgar prejudice against dissection, and, what is worse, venality, are, we believe, largely at work, and interfere with a regular supply of subjects to our dissecting rooms. It is not to be expected that parochial officers will give themselves any trouble in reference to matters for which no remuneration is offered; and although this unwillingness might be, perhaps, in many instances overcome by bribery or private influence, the parties have it in their power to decline co-operating in carrying out the objects of the act, and they can always base their refusal upon motives on which the public voice is sure to go with them. Disputes about the distribution of subjects have also, unfortunately, had the effect of causing the transference of many of the unclaimed dead to parochial cemeteries, instead of their being given up to the Inspector for the purposes of the Act. As the case at present stands, it is in the power of these parochial functionaries to put a stop to the study of practical anatomy; and it appears to us that the time has now arrived for those of our corporate bodies who demand from candidates a knowledge of this important science—the only sure basis of medicine and surgery—to interfere in order to procure a better supply. To return to the practices of the resurrectionists in the olden time is out of the question; and it would be equally Utopian to expect that any minister could be found, who would carry his views of free trade so far as to sanction, in another tariff, the importation of dead bodies from the continent for the supply of English dissecting rooms! We place little account for the efficient cultivation of anatomy, either on the exclusive use of wax-models, or on the preservation of subjects by antiseptic liquids; and yet, unless some steps be speedily taken for the *remodelling of some of the* clauses *of the Anatomy Act, the* most industrious students will have no other means of study at hand, and the most idle will have a justifiable plea for the entire neglect of anatomy. To specify in Collegiate regulations that a student must produce proofs of having gone through a certain amount of dissection, when, except by the perpetration of a misdemeanor—subjecting him to a fine of fifty pounds, or three months' imprisonment—he cannot possibly procure a subject, is grossly inconsistent! Medical schools have increased in number of late years, and with them there has been a great increase of students. The means for studying anatomy by dissection appear, however, to have gone on decreasing yearly, not from an actual scarcity of subjects, but from the facility with which the provisions of the Anatomy Act regarding their distribution may be evaded. We are persuaded that a revision of some of the clauses of this Act is imperatively required, and that great injury will be done to our schools of medicine and surgery unless immediate steps be taken to remedy the evil.

---

* 2 and 3 William IV. ch. 75.

WE beg to call the attention of our readers to the report of a very interesting trial for infanticide at page 897 of the present number. In the absence of clear signs of respiration from the condition of the lungs, it has been supposed that strong evidence of live birth might be derived from an examination of the *ductus arteriosus.* If the duct be found closed, it has been stated that this would furnish positive evidence of the child having lived and breathed after it was born. The medical witnesses for the prosecution deposed—and we have not the least reason to doubt the correctness of their statements—that they found the duct in this instance *impervious,* when the moral evidence proved that the child could have survived its birth only for a short period. The state of the lungs threw no light upon the subject. Various medical authorities were cited to shew within what period of time the arterial duct usually becomes closed in a new-born child; but no case was adduced of its having become impervious from natural causes so early as in this instance; and to this deficiency of proof the prisoners appear to have owed their acquittal. We know of no case of infanticide tried in Great Britain in which this important question has before arisen; and the whole of the medical evidence for the prosecution and defence is well worthy of attention.

DEATH FROM THE EFFUSION OF THE CONTENTS OF AN OVARIAN CYST AFTER TAPPING.

At a meeting of the Pathological Society of Dublin, Sir P. Crampton related the case of a lady in whom a large ovarian cyst, which began to form about nine years before her death, latterly caused so much distress, apparently from compression of the bladder by the tumor, that it was determined to have the fluid drawn off. Sir Philip introduced a small-sized hydrocele trocar, and drew off about three quarts of a viscous brownish-coloured fluid; when, the patient becoming faint, he thought it better not to draw off any more. The patient appeared to be doing well until the morning of the third day after the operation, when she occasionally vomited, and had continual nausea. About ten o'clock she was attacked with severe abdominal pain, and between one and two o'clock she died, with symptoms of collapse, —in little more than seven hours from the time she first complained. Upon examination, not a trace of inflammation was discoverable on the intestines, the cyst, or the peritoneum; the peritoneal surface was, on the contrary, peculiarly pale; but this sac contained a considerable quantity of the fluid of the cyst. The practical inference which Sir Philip draws at the conclusion of his statement is in accordance with Sir A. Cooper's opinion with regard to the propriety of deferring the operation as long as possible in cases of ovarian dropsy; and he adds that, as the operator never can be certain as to the existence or non-existence of adhesion, he should use a trocar of considerable length, and allow it to remain in the wound until the whole of the fluid seems to have drained off. The reason for using the long trocar is to provide against a slipping of the cyst off the canula on the subsiding of the cyst before its contents have been completely evacuated.—*Dublin Hospital Gazette.*

Reviews.

Homœopathy viewed in connection with Medical Reform. By Henry R. Madden, M.D. Edin. 8vo. pp. 162. London: Leath. 1846.

The author of this work, a former pupil and great admirer of Dr. William Henderson, whose secession to the ranks of Homœopathy has been made a subject of grave comment, announces himself as one of the "perverted." This does not at all surprise us: indeed a heresy of this kind appears infectious, and the transition from doubt to entire disbelief in the efficacy of what is called allopathic practice, among persons of unsettled opinions, is so easy that it is only natural to look for these occasional deserters to the ranks of Hahnemaniacs. Dr. Madden, making the most of certain admissions contained in an article published in a late number of the British and Foreign Medical Review, proceeds to examine homœopathy as a negative and positive system of practice. We contrived to wade through "*Homœopathy negative*" tolerably well, taking exception, however, to the author's assumption, that "the law of relationship between medicine and *disease* founded upon the action of the former upon the *healthy* organism," is the only plan for improving medical practice, and advancing it to perfection; because it merely involves the very essence of a doctrine which we believe to be untrue. We then arrived at *Homœopathy positive*; and here we at once stumbled upon certain difficulties connected with the infinitesimal doses, which require more faith, or rather credulity for their removal, than we can afford. We are first told, and cases are adduced to prove, that *decillionths* of *grains* of substances have most *decided effects* on the body, provided all substances likely to antidote the effects (!) are avoided. Assuming that manifest effects have followed from doses of a decillionth of a grain of sulphur,—What are the substances which act as antidotes to it? And how has this intricate piece of therapeutics been obtained? We do not believe, from the known properties of sulphur, that a grain could by any process be so divided as to allow us to have it in a medicinal shape in the proportion of one billionth, far less of a decillionth of a grain: and if such minute doses cannot be obtained with any thing like accuracy, how is it possible to speak of their relative effects? Admitting the dose to be so apportioned, we are told that when no effects follow, it is owing to the remedy not being homœopathic to the disease, whereby, like reasoning in a circle,—*obscurum per obscurius*, we fall back upon our old assumption, that the best way of determining the curative powers of sulphur in respect to a disease, is to study its operation upon a person who labours under no disease whatever! In carrying out this principle, it appears to be quite a mistake on the part of Orfila or others to attempt to determine the efficacy of antidotes by giving them to persons who have swallowed poison: if such persons recover we can draw no safe inference respecting the supposed remedy; because, after all, it may be, according to Dr. Madden's reasoning, a mere *post hoc, ergo propter hoc.* The true mode of investigation, following the *lumen Hahnemannicum*, is to watch the effects of the antidotes upon healthy persons who have taken no poison whatever, and by this plan we shall learn precisely what to administer in a case of necessity! Facts of this, or of an analogous kind, we are told, must not be taken to be mere fictions; they are what every homœopathist is continually in the habit of witnessing, and very curious facts or fictions they are.

Dr. Madden thinks that the circumstance of homœopathic globules being swallowed by bottlefuls, without producing the slightest symptoms, is a fact by no means adverse to their efficacy. He will also probably tell us, and wish us to believe, that a globule may still be efficacious in the decillionth attenuation, although the most refined chemical processes may fail to detect in it a particle of the substance to which its supposed efficacy is ascribed; but, in our judgment, a man must be very far advanced in Hahne*mania* to be satisfied with such a conclusion: if once satisfied with it, we know of nothing in the new doctrines which he need hesitate to admit. We are, however, informed that there are only three conditions under which homœopathic remedies evidence any perceptible action on the animal economy:—

1. When administered according to the homœopathic law (!) to individuals suffering from disease. 2. When the action is sustained by frequent repetition of the dose. 3. When the experimenter is peculiarly susceptible to the action of the remedy taken.

The first condition involves a mere assumption; for it is not proved that there is any *law* regulating the operation of remedies which can be called homœopathic. This is a simple *petitio principii.* The second condition appears to us to carry with it its own refutation. The author says some hundred globules may be swallowed in a single dose with perfect impunity; but a series of well-marked symptoms would be produced by the person taking two globules night and morning for several days consecutively. This we suppose is another homœopathic *law;* for where have we an instance with regard to the operation of substances on the human system of a body possessing a strong efficacy in small doses, and being perfectly inert in large doses? Half a grain of calomel may produce a decided effect when swallowed, but can a bottleful be taken with impunity? The effects of medicines are undoubtedly modified by the dose, but can it be admitted of any substance, that if one grain produces a decided effect ten or twenty grains will produce no effect? Homœopathists have, however, another convenient reservation. If, under these repeated doses, no symptoms should happen to be produced, this want of action may, according to them, be due to substances which antidote the effects; *e. g.* the smell of pepper or coffee, and such like mischievous and aromatic miasmata! As to the third condition, we very well know that idiosyncrasy will increase the operation of numerous substances; but it still remains to be demonstrated that this can be excited by doses of decillionths or even millionths of a grain!

Dr. Fleischmann, the renowned homœopathist of Vienna, has published, it is well known, a marvellous table of cures, according to which, if the statements be correct, there is something *positive* in a system which appears to be essentially negative. In a disputed question of this kind, however, statistics may easily mislead us; and we should decline to take the diagnosis made by a physician whose interest lay in trying to uphold a peculiar system of treatment. *Quod volumus facile credimus.* We believe that these cures are about as much to be trusted as those alleged cures of cancer and consumption which regularly enter into the advertisements of a certain class of London practitioners. Dr. Madden, however, adopts the view that cases of simple cure or improvement should be omitted in testing the efficacy of the homœopathic system; because they are open to explanation on the *post hoc propter hoc* principle. He thinks that cases of *reaction* afford better arguments "in favour of the action of our remedies." We confess we do not see exactly on what principle such a distinction can be drawn, for how are we to assure ourselves that the reaction may not be, like the supposed cure or improvement—a mere sequence, and not a consequence? In all these discussions, however, common sense appears to be entirely laid aside. We are called upon by the homœopathists to believe—1, that a particular substance produces a decided effect when there is no proof whatever of this substance being even present in the globule administered; 2, that a substance like charcoal (carbo) which is quite insoluble, and therefore indivisible in a liquid form, is still susceptible of certain division to the millionth, or even the decillionth of a grain, when no balance yet made can weigh less than the thousandth part of a grain; and common sense will show that trituration could never bring about such a division of parts: and 3, that a substance in a small dose will produce a powerful effect, while the same substance in a large dose may be taken with perfect impunity! To suppose that assumptions of this kind can ever be made subjects of demonstration, or that they can be received as a basis for a reform in the practice of medicine, is absurd. They appear to us to show that the Hahnemannic therapeutics can only be regarded as a downright system of imposture, and therefore unworthy of serious refutation.

Practical Observations on Mineral Waters and Baths; with Notices of some Continental Climates, and a Reprint of the Cold-water Cure. By EDWIN LEE, &c. &c. Sm. 8vo. pp. 134 and 42. Churchill: London. 1846.

WE fear that during the period in which so large a proportion of the community have suffered from a delusive idea of the necessity of submitting their valuable constitutions to the perilous test of the "question by water," the thousand attractions afforded by the various Continental baths have been sadly overlooked. While hundreds have wended their way, full of aches and hopes, eager to quaff with an enthusiasm worthy of a better fate the contents of the huge reservoirs at Boppart, and to essay their prowess in exhausting the mountain streams of Silesia, the healing fountains of Nassau, Auvergne, and the Pyrenees—to say nothing of our own Leamington, Cheltenham, and Bath—have in a great measure gushed and bubbled in vain; and it seems to be by no means unlikely that, if the delusion should last for a few years longer, the whole of these once flourishing watering-places will, as has long been the case with the city of Bladud, be wholly abandoned to the spirits of promenading, whist-playing, and roulette, their waters being applied to the base purposes of cleansing, rather than to the higher uses of invigoration and cure. Mr. Lee is, however, evidently disposed to give the two conflicting systems fair play, stating the peculiar virtues of each in a very impartial manner, and affording to the reader a tolerably just notion of both.

In composing this little volume, the author does not appear to have aimed at originality; but has merely given a brief account of the principal Continental mineral waters, their classification and effects; their adaptation to various states of disease, and the modes in which they should be severally employed. In doing this, he has illustrated his subject very copiously with the opinions of foreign writers.

Dr. Lee, and the whole of his authorities, evidently have great faith in the remedial powers of mineral waters, strongly advocating their medicinal efficacy, and opposing the rather prevalent opinion that change of scene, air, and occupation, have a principal share in cures which have been attributed to the use of the waters alone. The author remarks that—

"Some persons ascribe the benefit from a visit to a mineral spring entirely to the journey, the mental relaxation and freedom from the cares of avocation, the exercise in the open air, &c. That many invalids would derive great advantage from the mere change of air, scene, and mode of life, is unquestionable; and it is equally true that without these important auxiliaries the beneficial effects would not be produced in many instances; yet there is no doubt that, in the majority of cases, the benefit is mainly to be attributed to the medicinal operation of the water, which, though slow, and often not productive of immediate and active effects, is on that very account more suited to the class of chronic complaints in which mineral waters are usually employed. It must also be borne in mind that in several of the worst cases, in those who resort to mineral springs for relief, these auxiliary circumstances can have no influence, and the benefit obtained is clearly to be ascribed to the waters alone. Many persons are unable to take exercise, care little about the beauties of scenery, take no interest in public amusements, soon become tired, and experience discomfort at being separated from their homes and friends, and are induced to subject themselves to the inconveniences of a long journey to a mineral spring by the expectation of a benefit which they know they are likely to derive from it. How many persons have I known, crippled, and almost confined to their room, suffering from pain, without society or resources for amusement, whose spirits have been greatly depressed on account of their condition, and the inconvenience of a residence in a crowded hotel or bath-house, and, notwithstanding, a short time after using the baths, have experienced a sensible amelioration, and have ultimately recovered, though they had previously tried other means of relief without success. These are the cases by which the powers of mineral waters may be satisfactorily tested. Many persons, again, engaged in business, soon experience at a bath the influence of ennui, are disinclined to form new acquaintances, and are anxious respecting the course of their affairs, and yet are induced to prolong their stay from the evident improvement in their health during the courses, though, perhaps, little or no alteration is made in their ordinary time of rising or in their diet. Such persons, where a course of bathing is not required, will often derive as much benefit from drinking an artificial mineral water, which may also be recommended as an efficient substitute when a person cannot undertake a long journey, of if he reside near an establishment of mineral waters, and is desirous not to absent himself from his family and his avocations." (pp. 33-5).

The author makes some useful observations with regard to the comparative advantages and disadvantages which attend the use of natural and artificial mineral-waters. Nearly the whole of the principal mineral waters are now prepared at various places on the Continent and at Brighton upon a plan first adopted by Dr. Struve, in a very high degree of perfection. "Distilled water only is used, and the best analyses are so closely followed that even minute portions of inert substances, as silex, are not omitted." It appears that several eminent German practitioners, who have had frequent opportunities of testing the merits both of the natural and artificial waters, are of opinion that, looking to the water alone, with regard to its internal administration, the artificial are equally efficacious with the mineral waters; whereas other equally high authorities consider the former to be inferior to the latter, though they allow that there is great analogy between them, and that the former may be regarded as an efficient substitute, and are well calculated to render great service in the treatment of chronic diseases.

The principal disadvantage attending the use of mineral waters is that their use must be chiefly restricted to their internal administration. The climate in which these waters are found is in many instances believed to render considerable aid in assisting their remedial effects; they "also have an advantage over artificial waters in most instances in being favoured by auxiliary circumstances calculated to promote the restoration of health." The journey, the change of air and scene, and the discipline to which the patients submit themselves, all have their influence. On the other hand, the author argues that, when drinking is the more essential part of the treatment, artificial waters have in some respects the advantage over natural ones: thus, they are available during the greater part of the year, instead of their employment being restricted to a few months in the summer, as is the case at the various baths. They also admit of being used experimentally: where one kind of water fails to produce the desired effects, the use of another may be at once commenced. They can also be procured without difficulty by those who are unable or unwilling to undertake a long and fatiguing journey.

The following remark by Dr. Von Ammon ought, we think, to have due weight with practitioners both at home and abroad:—"Patients go to Teplitz to be cured who should have gone to Carlsbad, and invalids who can scarcely bear the mildest springs of Ems are sent to drink the Sprudel at Carlsbad. If all the bath doctors who perceive these errors committed by physicians, were but honest enough on the arrival of patients to send them away, and dissuade them from the use of a water which may do them more harm than good! But honesty and policy do not always go together."

The brief pamphlet on the water-cure which gives a very fair and rational view of the merits and fallacies of that mode of treatment, is neatly written, and does not weary by its prolixity. Although stated to be a third reprint of the pamphlet, the colour of the paper proves it to be of a somewhat older date than the "practical observations," and it fits in rather awkwardly with the larger pages upon which the preceding essay is printed. Probably our copy contains one of the second or first edition of the pamphlet, or perhaps the two conflicting systems will not admit of being combined in the same volume any more than the graternal ashes in the ancient myth, would suffer comminglement upon the same pyre. Certainly the description of the waters of Graefenberg and Marienberg appears to be shrinking away in instinctive abhorrence from the account of the baths of Aix, Carlsbad, Ems, &c.

Chemistry of the Four Seasons: Spring, Summer, Autumn, and Winter. By THOMAS GRIFFITHS, Professor of Chemistry in the Medical College of St. Bartholomew's Hospital. 8vo. pp. 495. London: Churchill, 1846.

MR. GRIFFITHS informs us in his preface, that he has written this essay not for the proficient, but for the uninitiated in chemistry. His object, as we gather it from the contents, has been to bring before the reader, in plain and intelligible language, the various chemical phenomena which are connected meteorologically or otherwise with the change of seasons. He has also incorporated with his remarks many suggestions on the connection of chemical science with natural theology. Our readers will perceive from this statement that the work is addressed rather to the public than the profession. The experiments and illustrations are throughout of a very elementary and popular kind, such as most medical students are likely to have become acquainted with in the first year of their apprenticeship. By this remark we do not mean to depreciate the labours of Mr. Griffiths, who has evidently devoted much industry and ingenuity in collecting his facts, especially in relation to agricultural chemistry, and in adapting them to the seasons of the year. Many of the facts and observations might have an equal application to each of the seasons: nevertheless, without criticising too closely the principles upon which the science of chemistry has been spread over the four seasons, we may say that the author has produced a treatise well fitted to convey much useful information to those individuals for whom it has been expressly written.

Urino-Genital Diseases. Part 1: *On Gonorrhœa and Gleet in the Male; exemplifying the influence of a Scrofulous or Scorbutic State of the System in producing those Morbid Secretions, and shewing that the true nature of their diseased action is Irritative, not Inflammatory.* By GEORGE FRANKS, Surgeon. 8vo. pp. 122. London: published by the Author. 1846.

To any person who had not studied closely the views with which a certain class of pseudo-medical works are offered to the public, it might appear to be an act of ineffable folly in the writer of a production like that which is now lying before us, to send the fruits of his lucubrations to be reviewed by the editors of a respectable medical journal. Such an idea, however, would be perfectly erroneous; it is to the effrontery, not to the imbecility of the author, that we are indebted for the task of noticing his worse than indifferent production. The fact is, essays of this description have, so far as the reviewers are concerned, a very considerable advantage over those memoirs which treat of pure science, and which are published simply for the purpose of adding to the store of knowledge: the latter win their way to fame only by force of their own intrinsic merits, or fall at once beneath the scrutiny of critical analysis, while the former are capable of thriving under far rougher treatment: the strongest lashes of the professional critic are received with indescribable satisfaction by their authors, one of whose guiding principles is, that intense public disapproval gives more notoriety to a work than do the blandest praises of a legion of reviewers. Besides this, it must be remembered that these choice specimens of authorship do not rest solely upon their own merits; they are merely the slender and fugitive means which are employed to usher in the great and substantial end—the bills of fare which afford a faint description of the exquisite treat contained within certain sealed and stamped flasks of divine elixir, vended at a repository to which these pages indicate the way; they, in fact, invariably bear precisely the same relation to some pill, unguent, syrup, or solution, that the elaborate treatise on the human hair has to the "incomparable oil Macassar," and therefore deserve to be esteemed accordingly. And so, accordingly, do we esteem the work of Mr. George Franks, surgeon: we assure that gentleman that we fully appreciate his affectionate solicitude for "young persons who are very apt to suffer from the concealment of their errors, and thus inflict serious injury upon their health and constitution,"—a circumstance which has, we are informed, in conjunction with the author's "mature reflection, and *the advice of his professional friends*" (!) been the cause of his determination to undertake the trouble of confining the manufacture of his *specific* to himself, and of vending it "as a public or stamped medicine."

We shall conclude by asking why the author is allowed to retain the title of Member of the Royal College of Surgeons in England?

Proceedings of Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

November 10th.

DR. WATSON IN THE CHAIR.

ON taking the Chair, Dr. Watson apologized for the absence of the president, Dr. Chambers, on that, the opening night of the session.

Two Remarkable Cases of Encephaloid Disease of the Heart, with Observations. By Mr. PRESCOTT HEWETT, Lecturer on Anatomy at St. George's Hospital Medical School.

CASE 1.—B. R——, aged forty, was admitted into St. George's Hospital in May, 1844, with a large tumor, apparently of a carcinomatous nature, connected with the back part of the left foot. The disease had existed about a year, and had been rapidly increasing in size latterly. With the exception of the tumor, the patient appeared to be in good health; there was no dyspnœa, no œdema; in fact, no symptoms of any visceral disease. Ten days after his admission, the leg was removed. The tumor proved to be of an encephaloid nature, and had apparently begun in the os calcis. Six days after the operation, the patient died with symptoms of secondary inflammation of the pleura. At the examination of the body, marks of extensive recent inflammation were observed about the left pleura and pericardium. The right cavities of the heart were much dilated, with hypertrophy of the walls of the left. In the right auricle was a large growth, which, proceeding from the appendix, occupied the greater part of the cavity of the auricle, and passing through the auriculo-ventricular opening, projected some distance into the ventricle. When cut into, this tumor presented a highly vascular appearance, and in structure resembled exactly the encephaloid disease of the foot for which the patient's leg had been removed. The valves were healthy in structure. No carcinomatous disease was found in any other part of the body. Some pus was found in one of the veins of the stump.

CASE 2.—M. H——, aged fifty-nine, was admitted into St. George's Hospital on Dec. 10th, 1845, with a tumor of the breast, apparently of an encephaloid nature, and some enlarged absorbent glands. The countenance was anæmic, and of a yellowish colour, but the patient was cheerful, and presented no symptoms of disease beyond that of the breast. A red blush, of an erysipelatous character, existed in the skin covering the breast, and spread to some distance.

Under existing circumstances, it was deemed advisable not to meddle with the disease. The tumor gradually increased in size, and the skin ultimately broke, giving passage to a large fungating growth. Some six weeks after her admission into the hospital, she was, one day, suddenly seized with urgent dyspnœa and partial syncope, and died on the following day. No symptoms of disease had existed about the chest up to the day preceding her death.

At the examination of the body, the tumor proved to be of an encephaloid nature; the disease had spread to the glands in the axilla. A small encephaloid tumor was also found in the left rectus abdominis. The cavities of both pleuræ contained a quantity of clear serum; the lungs were healthy; the heart was enlarged by dilatation of its cavities, the dilatation of the left auricle being more marked than that of the other cavities; the mitral valve was slightly contracted, and there was some thickening of its tendinous cords; the auricular surface of this valve was extensively covered with a soft deposit, which, to the naked eye, presented all the characters of encephaloid disease; the opening of the valve was all but closed, there being merely an aperture the size of a quill for the passage of the blood. The aortic valves were slightly thickened; the abdominal viscera were healthy; no œdema about the extremities. The portions of the diseased structure, both of the breast and of the heart, which were examined by the microscope, presented some large nucleated, but no caudate cells.

The author, after stating that both these cases presented rare forms of carcinomatous affections of the heart, called the attention of the Society more particularly to the second case, in which was a well-marked specimen of encephaloid disease of the free surface of the endocardium, an affection rarely met with; so rarely, that Dr. Walshe, in his treatise on "Cancer," alluded to only one case, which was of a doubtful nature. After a quotation from Rokitansky, who states that encephaloid deposit does sometimes occur about the valves of the heart, the author called attention to the curious fact, of the patient, in the first case, having undergone a most severe operation, without ever evincing any symptoms of the extensive disease which existed about the heart.

Dr. GOLDING BIRD inquired if in these cases any examination of the chest had been made previous to the operation? He believed that such an examination would have indicated the presence of the disease which existed.

Mr. HEWETT replied, that in neither case had any examination of the chest been instituted, inasmuch as no symptoms existed of disease in that region. There was no swelling of the extremities, and no disturbance of the circulation.

Dr. WATSON said, that in all such cases it was desirable to examine the chest, even though there might exist no suspicion of disease being there.

Mr. LLOYD said, that in St. Bartholomew's the chese was always examined in such cases.

Case of Peritonitis, with Purulent Effusion; Spontaneous Evacuation of Pus through the Abdominal Parietes.—Recovery.

By C. J. B. ALDIS, M.D., Physician to the London and Surrey Dispensaries.

The subject of the above case was a little girl, aged 7, whom the author saw for the first time on June 5th. At this time the abdomen was greatly distended, with umbilieal protrusion and fluctuation. A small swelling, with thin parietes, was observed between the margin of the ribs and umbilicus on the right side. It was reported that eleven weeks previously the child had been attacked with chilliness, followed by heat and vomiting, with pain in the belly, feverish symptoms, and delirium. The tumefaction of the abdomen first appeared in about four weeks.

After a careful examination of the abdomen, no enlargement of any of the viscera could be discovered. The motions never contained purulent matter. From the history of the case and the present symptoms, the author considered it one of peritonitis with effusion, the swelling above mentioned being an effort of nature to evacuate the effused fluid.

On the 8th of June about five quarts of pus escaped through a perforation of the abdomen occurring naturally in the swelling. After this, the abdomen was uniform in appearance: no tumor nor remains of a cyst could be traced. The discharge continued more or less until the 31st of July, when it had nearly ceased. The author lost sight of the case until Sept. 14th, when he found she was in perfect health. A cicatrix had formed where the discharge issued.

The author concludes by remarking that the case is interesting, from the unusual termination of peritoneal inflammation. Dr. R. Lee has informed him that he has met with several cases of puerperal peritonitis terminating as the above one, but has never met with a similar instance in children.

Dr. WATSON observed, that purulent matter, the result of peritonitis, was uncommon, whether in relation to children or adults. He inquired if any of the members had met with a case analogous to the one just read.

Dr. ALDERSON regarded the case as one of abscess in the walls of the abdomen, and thought that there was no evidence of peritonitis having existed.

Dr. **Aldis** said that he had, in the narrative of the case, enumerated various symptoms of peritonitis, such as tenderness on pressure, and vomiting; but, as he had seen the case on the first occasion eleven weeks after the peritonitis had existed, he could not be more precise in his account of it. Five gentlemen besides himself had seen the patient, and regarded the disease as peritonitis. Fluctuation existed over the entire abdomen, which was very much distended. He referred to three cases of a collection of a matter to a smaller extent occurring as the result of puerperal peritonitis, in the practice of Dr. R. Lee.

A Case of Traumatic Paraplegia, with the Post-mortem Appearances. By **Samuel Solly**, F.R.S., Senior Assistant-Surgeon to St. Thomas's Hospital, &c.

In this case paraplegia resulted from inury to the spinal cord, caused by fracture f the fifth cervical vertebra. Death ocurred 58 hours after the receipt of injury.

Mr. **Solly** brought forward the case as mportant in a physiological rather than a ractical point of view, and particularly as earing against some recent argument, tendng to shew that the anterior and posterior olumns of the cord do not perform the ame office as the roots of the nerves conected to them.

The symptoms were those of complete oss of motion, while the sensibility of the kin was at first much exalted, though it became natural before death. The author drew attention to the incessant vomiting from which the patient suffered, and which he seemed disposed to attribute to irritation of the sympathetic nerve by the rough surface of the fractured body of the vertebræ, as shewn in the post-mortem examination. The examination was performed 18 hours hours after death, the weather being cool and showery.

There was sanguineous effusion into the muscles at the lower and posterior part of the neck, and fracture of the fifth cervical vertebra, extending through the arch on the right side, and thence through the body of the bone; also on the right of the mesial line. The fractured edge of the body presented a rough surface forward into the neck, and was in contact with some branches of the sympathetic nerve, which were red and stained with blood. The intervertebral substance was torn and seperated between the fifth and sixth cervical vertebra. The joint was opened between their articulating processes, so that there had been a complete dislocation of these two bones with the spine above and below, On examination of the cord, there was no lesion perceptible to the sight; but by placing the knife carefully across its anterior surface, and carying it from above to below, it sank in between the fourth and fifth cervical nerves, showing that the cord was softened at this part. Posteriorly there was no alteration in the surface; it was uniformly firm. A transverse section did not exhibit any change in the colour of the medullary portion. The cineritious matter was of a deeper and rather redder colour than natural. In texture there was a great change, the anterior half of the antero-lateral colums being quite soft and pulpy. All between the posterior lateral groove and the posterior mesial groove was firm and elastic, like the rest of the cord; a small portion of the posterior third of the antero-lateral column was also firm, but there was not a distinct line of demarcation between the soft and normal portions of the cord. This alteration in texture did not extend more than a quarter of an inch in the longitudinal direction of the cord. Above and below this point the cord was uniformly firm and normal. The brain was perfectly healthy and firm throughout.

The discussion which ensued on this case had reference mainly to the objects and statements of the author, who explained his views by referring to the contents of his paper.

Mr. **Shaw** made the following observations in reference to the question of the functions of the posterior columns of the spinal marrow,—that two cases had recently been published in the *Transactions* of the Society, where the facts were opposed to the conclusion drawn by Mr. Solly,—that these columns bestow sensation. In one, published by Mr. Stanley, the patient, having lost the power of motion, retained sensibility, and yet, after death, the posterior columns were found disorganized by disease. In the other, the symptoms were the same, and upon dissection Dr. Todd found the posterior columns destroyed by softening. He (Mr. Shaw) considered that, in the examination of this question, sufficient attention had not been paid to the exact mode in which the anterior and posterior roots come off from the spinal marrow, or to the assistance which may be obtained by comparing the origin of the fifth cerebral nerve with that of the spinal nerves. In regard to the first point, the anterior roots of the spinal nerves arise by numerous fine radicles from the very surface of the anterior column, thus apparently showing that the part of the cord from which they derive the power of motion, is situated superficially. The posterior roots, on the contrary, dip bodily into the interspace between the posterior-lateral and posterior columns, and they reach a deep part of the organ before they subdivide to form any perceptible connexion with the cord; in short, the mode of the origin of the posterior roots is quite different from that of the anterior, and from their passage so deeply into the interior, it may be inferred that the part of the cord which bestows sensibility is situated deeply. These views throw light on a fact which must have been frequently observed in cases of disease or injury affecting the spinal marrow—namely, that the power of motion is commonly lost before sensation, or is destroyed to a comparatively greater degree; the explanation of which seems to be, that the morbid action affects the column of motion situated superficially, before it can reach those of sensation, placed more deeply in the cord. In regard to the proofs which may be drawn as to the exact columns of the spinal marrow which confer sensation, from tracing the roots of the fifth cerebral nerve to their origins, some dissections, described by Sir Charles Bell in his later papers to the Royal Society, seemed to be of a peculiar interest. The fifth nerve resembles the spinal nerves, in having two roots, one of which bestows motion, and the other sensation. It arises at the base of the brain, from the side of the pons varolii, apparently at a very remote distance from the spinal marrow. It is well known, however, to anatomists, that the larger root, proved to be that which gives sensation, has its real origin from a point which may be considered the commencement of the spinal marrow. On following the thin, flat, ribbon-like band of medullary matter which forms the proper root downwards through the medulla oblongata, Sir Charles Bell was satisfied that it did not pass in the direction of the posterior column of the spinal marrow, and that it had no connexion with that column: he observed, that it took a more lateral course, and disappeared in a tract which he regarded as the continuation of the posterior lateral column. From the same column he found posterior roots of the spinal nerves arising, and he consequently inferred that it is the posterior-lateral column, and not the posterior, which is the source of sensibility in the cord.

MEDICAL SOCIETY OF LONDON.

Monday, Nov. 9.

MR. DENDY, PRESIDENT.

DR. BENNETT, in allusion to the discussion at the last meeting, said that he regarded opium as one of the most valuable of our remedial agents in inflammatory diseases. He questioned, even in the combination so frequently employed, viz. calomel and opium, whether the opium might not act as well without the calomel.

Dr. M. HUGHES related the following case of

Disease of the Chest.

On June 15th, 1846, Benjamin H—— was admitted into Guy's Hospital, under my care, for spitting of blood. His age was 33, and his occupation a lighterman. He was rather slightly built, had brown hair, a soft skin, and a rather light complexion. He had, some years ago, suffered from a slight attack of spitting of blood, but, with that exception, had generally enjoyed good health. He had, through life, worked hard, and, on the whole, had lived regularly. The hæmoptysis was, upon his admission, only slight, and he had no febrile excitement; his tongue was clean, and his skin natural. Upon tolerably minute examination of the chest, no obvious disease of the lung was discovered, and, certainly, no positive evidence of the presence of tubercles could be ascertained to exist. There existed, however, a soft systolic murmur, which was audible below the left nipple, in the axilla, and not in the course of the aorta, and was accompanied with a powerful impulse of the heart, and a weak and, as it were, broken pulse, which was therefore supposed to be dependent upon imperfection of the mitral valve, and regurgitation through the left auriculo-ventricular opening. He was ordered to be kept quiet in bed, to take only mild nourishment, and to be cupped to eight ounces in the scrobiculus cordis; a rhubarb and calomel purgative was ordered to be taken directly, and some infusion of roses, with sulphate of magnesia, three times a day. With the exception of some saline effervescing medicine, administered for two days, in consequence of a slight cold, this medicine was continued for eight days, when a single grain of quinine was added to his mixture, and his diet was improved. In a few days he complained of pain in swallowing, and soreness of the throat, but he had little or no cough; and upon examination there appeared to be only a very slight injection, without any enlargement of the fauces. A nitric acid gargle was prescribed.

On the 28th, fourteen days after his admission, he was found, without any previous complaint, or any indication of the coming mischief, to have a pungently hot skin, and a short cough, with a scanty, white, frothy, but viscid expectoration; the tongue was furred, but moist; the pulse increased in frequency and sharpness. To our great surprise, the left side of the chest, as high as the nipple, or rather higher, was now found quite dull on percussion, and afforded well-marked tubular breathing, with an entire absence of respiratory murmur. The voice was loud and shrill; bronchophony, in fact, was perfectly well marked; there was no displacement of the heart, no pain, and but very trifling dyspnœa. But for the existence of the physical signs, indeed, he might have been supposed to have had an attack of simple fever, with bronchial complication. With them, notwithstanding the entire absence of crepitating rattle, he was presumed to suffer under severe and rapidly progressive pneumonia. Antimony in moderately large doses, together with calomel and opium, were freely administered, blisters applied, and mercurial ointment rubbed in; but without any effect in either arresting the disease or affecting the mouth —not the slightest effect appeared to be produced upon either. The disease, on the contrary, progressed rapidly, so that, in three or four days, the entire left side became dull upon percussion, and marked tubular breathing and bronchophony were audible throughout. The soreness of the throat and difficulty of swallowing were still troublesome, and constituted his chief source of complaint. For this, mustard poultices and acetum lyttæ were applied with some relief. The cough was still very trifling; the expectoration scanty and mucous, but viscid and white; the dyspnœa was not great; but the skin was persistently hot, generally pungent and dry, but sometimes, though hot, covered with perspiration. Remedies appeared to have little or no effect upon the progress of the complaint. The only change observable from day to day was, that he got weaker, and that the lower part of the left side of the chest was now occasionally dull and occasionally resonant, according as the stomach was more or less filled with food or distended with gas. On the 7th of July, nine days after the discovery of the presence of pneumonia, the lung appeared to be breaking down inferiorly. This seemed at least indicated by the presence of soft mucous rattles, succeeded by gurgling. In less than a week after this, the same signs, but of a more marked character, appeared in the apex of the lung, below the left clavicle, and above the spine of the scapula, while tubular breathing existed in all the lower parts of the lung posteriorly. Together with gurgling, there also appeared, below the left clavicle, amphoric breathing and pectoriloquy. All antiphlogistic remedies were now suspended, and good nourishment, with sedatives and mild tonics, were alone administered. No important change in his symptoms or condition took place till August 3d, during the night preceding which he was suddenly attacked with difficulty of breathing and pain of the left side. His appearance and the physical signs were now entirely changed. His dyspnœa was considerable, his skin cool, and his pulse feeble and frequent. The side, with exception of a small space below the clavicle, was tympanitically resonant on percussion anteriorly; the heart was displaced behind the sternum, and amphoric breathing, with shrill metallic resonance of the voice, and cough, were clearly distinguishable, He had no cough. and he could lie upon either side, or upon his back, but inclined generally to the affected side. He had not observed any sensation of a stream, or of inflation, at the time of the occurrence of the dyspnœa. He was ordered to be kept perfectly quiet, and to take ten grains of laudanum, in camphor mixture, every six hours; and half a grain of opium at bed-time, with good nourishment, as before. In a few days time, the chest began to get dull again from below upwards, and succussion, with metallic tinkling, so characteristic of pneumothorax with effusion, became obvious. With these he died, worn out by his complicated disease, nine days after the appearance of pneumothorax, seven weeks after the discovery of pneumonia, and nine weeks after his admission, three days before which he was attacked with hæmoptysis.

Inspection of the body. — *External appearances:* The face was pallid, and the legs œdematous. The head was not opened. *Thorax:* On carefully incising one of left intercostal spaces on the anterior of the chest, a quantity of gas escaped with a whizzing noise. The *left pleura* contained about three pints of sero-purulent fluid, the membrane being itself covered with a thick layer of soft coagulable lymph. Upon inflating the left lung by a tube introduced into the bronchus before the parts were disturbed, numerous bubbles of air escaped freely through the fluid, and were found, after the removal of the lung, to proceed from a large ragged opening through the pleura, near the lower margin of the upper lobe. The upper part of this lobe was considerably disorganized, and contained several small irregular cavities, with a light olive-coloured, soft, non-plastic lining. The other portions of the lung were greatly consolidated, in part from compression, but principally from hepatization of a dark purplish colour, interspersed with large white firm tubercular masses, giving it a remarkable and variegated appearance. The very apex of the right lung was firm and hard, from old dark grey consolidation; the lobes contained a very few scattered miliary tubercles. The entire lung was adherent to the costal pleura. The *larynx, trachea,* and *bronchial tubes* of the left lung, to the second divisions, had the surface of the mucous membrane scattered with superficial ulcerations. The *pericardium* contained several ounces of clear serum. The right side of the *heart* was gorged, but healthy. The *aortic valves* were rather thick, and their crescents delicately fringed with exceedingly minute bead-like granulations. The *mitral valve* was thick and opaque. The *left ventricle* moderately dilated and hypertrophied. *Abdomen:* The glands of the mucous membrane of the small intestines were enlarged, and in parts slightly ulcerated. The *liver* was large and turgid. The *kidneys* firm, and much injected. The *bladder* was distended with high-coloured urine, and the other organs were natural.

Dr. **Hughes** regarded the following among the chief points of interest in the case he had related:—

1. What was the cause of the hæmoptysis? Did the case illustrate a proposition of Louis, that hæmoptysis rarely existed independent of tubercles? or did it arise in this instance from the interference to the circulation consequent upon the valvular disease of the heart? It was difficult, perhaps, to determine upon which of these causes the hæmoptysis depended. He was inclined to think that both might have had a share in its production.
2. The remarkably sudden appearance and advanced condition of the pneumonia when discovered, the patient being seen by himself or the clinical clerk daily. Though this case might appear to favour the opinion of Stokes, that consolidation of the lung might take place without crepitation, he (Dr. Hughes) was inclined to think, that if this patient had been examined hour by hour, or minute by minute, crepitation would have been detected.
3. The comparatively rapid progress of the inflammation.
4. The very marked physical signs throughout the entire case.
5. The case illustrated the fact, that the general symptoms of pneumo-thorax were less distressing in proportion as there was more disease in the lung and of the affected side. There was less distress where there was a hundred than where there was a single tubercle.
6. What was the complaint?

Dr. L. **Stewart** regarded the disease as one more of inflammation than phthisis.

Dr. **Bennett** said the case illustrated points of great interest and difficulty. With regard to the hæmoptysis, there was enough disease here to substantiate the dictum of Louis, but he doubted its general applicability. He considered the case as one of tubercular pneumonia. With regard to the treatment, he agreed with Dr. Hughes, that bleeding would have been injurious. Calomel and opium might be employed, as in ordinary pneumonia, but in less doses, and at longer intervals; counter-irritants should be earlier applied.

Dr. **Hughes**, in answer to a question, observed that he could say very little in favour of blisters or other counter-irritants in this class of cases. If any thing appeared to be of temporary benefit, it was moderately large doses of tartar emetic; but, generally speaking, nothing was of use.

Mr. **Robarts** believed that some remedies which had not been alluded to might have been employed in the case under discussion; cupping over the thorax to a slight extent, warm linseed poultices, and iodide of potassium and liquor potassæ after the other remedies. He should not use mercury where there was a suspicion of phthisis.

Dr. **Hughes** reminded the last speaker, that however valuable the iodide of potassium might be in a chronic stage of the disease, in the case he had related acute inflammation was present up to the time of the occurrence of the pneumo-thorax. He thought that in his case the inflammation had been the result of the white, scrofulous, unorganized masses found in the lung, and the presence of these explained the absence of the physical signs of pneumonia.

Mr. **Alder Fisher** alluded briefly to a case of hæmoptysis with pneumonia, in which, after death, the lungs were found full of encephaloid masses.

SOUTH LONDON MEDICAL SOCIETY.

November 12, 1846.

Charles Waterworth, Esq. President, in the Chair.

Dr. **Silvester** read a paper on

Venous Bruit.

The author, after referring to the opinions of Laennec, Bouillaud, Dr. Hope, M. Aran, Dr. Ogier Ward, and M. Beau, stated that it would appear from these that the exact situation of the continuous bruit, its physical cause, the nature of the changed condition of blood, and the semeiological value of the symptom, had not been satisfactorily explained or agreed upon, and which uncertainty, from a regard of the great practical importance of the matter, prompted the author to investigate upwards of 100 specimens of the phenomenon; a minute and accurate tabular view of which accompanied the observations. In regard to the age at which it may be heard, the youngest specimen was in a boy of two years, the oldest a woman of 50; and, from the tabular view of cases, the author inferred that the venous murmur is discoverable for the most part in youth and middle age, and suggested whether, happening at a period of life when the blood is undergoing frequent alterations as to quantity and quality, this symptom may not owe its existence to some morbid change in the circulating fluid. As regarded sex, it was noticed in 8 males only, 7 of these being under the age of 10; one need not, therefore, hesitate to admit that the murmur prevails chiefly among females. Attention being directed to the state of the uterine system at the time, it was found that the cases of amenorrhœa amounted nearly to one-half; of menorrhagia to one sixteenth; of chlorosis, or imperfect secretion before full establishment of catamenial habit, to three only,—making a total of 66 cases in which the uterine secretion was anormal: although it would appear that, in a majority of cases, some interference with the monthly function of the womb takes place, this interruption, from cases briefly mentioned by the author, cannot be regarded in the light of a cause, but as a mere concomitant, or perhaps effect, though not a constant one, of an imperfect digestion of the materials of nutrition. Pure well-marked specimens of amenorrhœa, without a trace of bruit in the vein, or any unusual sounds in the cervical region, are not uncommon; nor does the bruit prevail invariably in leucophlegmatic habits with rapid pulse. Some morbid poisons appear to injure the blood, and produce a bruit. In a case of syphilitic nodes of some years' standing, with cutaneous affection but healthy appearance, a loud musical sound was heard, evidently in the jugular vein alone; it was also audible in cases of erythema nodosum of the legs, of severe boils and ague. Still all poisons do not possess a similar power of deterioration, as in examination during every stage of even fatal scarlatina it was not heard. The same remark applies to typhus and phthisis, except in the very early stage. Out of the 100 cases, in 45 the cheeks were pallid, inner eyelids, gums, &c. white, complexion of a dingy or muddy hue. There was much variety in the remaining number, but it was by no means an uncommon occurrence to discover a bruit (generally of the intermittent kind) in persons who otherwise presented signs of good health, although, by further inquiry, loss of appetite, epigastric sinking, and other signs of a more or less disordered digestion, were discovered. In 83 cases, anorexia, acidity, pain or sinking at epigastrium, existed. Sympathetic pain of left side was not frequent. Although in systematic works venous bruit is set down as a mere symptom of chlorosis, it would be much nearer the mark to describe this curious buzz as the remote consequence of indigestion; but to determine whether dyspepsia or imperfect vitalization of food be the principal cause, requires much careful and extended investigation into quantity and quality of food, extent of exercise, and other conditions of the patient. With regard to the nature of the change the blood seems to have undergone, much difference of opinion prevails among authors; some believing in its deficiency, some in its excess; while others have found, during the existence of a bruit de diable, a normal *condition* of its composition: many facts combine to strengthen the belief of the author that the blood is not in a normal condition; but the information of chemistry on this head is not copious or decisive enough to connect the deterioration of this fluid with the diverse sounds occurring in the heart, arteries, or veins, or in these vessels simultaneously. As to the locality of bruit, the author is not acquainted with any method by which bruit de diable, or other unusual sound, can be elicited in the arteries or veins of persons enjoying good health: the same may be said of some in ill health; but there is a bruit situated exclusively in the artery, and easily excited by the slightest indentation of the stethoscope; the tone of this murmur can never be confounded with that of the vein. In a pallid young lady, æt. 23, whose lips, &c. were white, menstruation regular but imperfect, heart free from mischief, the rasping sawing bruit of the carotid was overwhelming to the ear, and resembled the harsh suction of a piston. A sound akin to this as to cause is often met with, the difference consisting in the softer character of the one now alluded to; it is situated in the artery, and much resembles in its tone the venous bruit. The pure intermittent venous murmur very frequently fell under notice; the sound appeared induced by the artery, but was more prolonged, rather roaring, and evidently diffused. Is this the first stage of the venous bruit? If so, it would yield last in the progress of cure, which the author suspects to be the truth. By far the greater number of specimens in the author's case-book were of the continuous form, more or less distinctly accompanied by subsiding pulsation and of various characters. Cases of bruits in the external jugular are rare, and very delicate manipulation of the stethoscope is requisite to bring out the peculiar rushing sound which is continuous, but to an unskilful operator may appear remittent or interrupted. Musical sounds are often, though not exclusively, mingled with the continuous bruit, and, by firm pressure, the latter may be obliterated without affecting the pulsation of the artery. The same effect arises from slight pressure of the larynx backwards. The most perfect examples may be produced by pressing the finger across the vessels, and it is not difficult, by a regular recurring touch of the point of the finger on the vein, to simulate arterial bruit. The *continuous* bruit may sometimes be heard on an application of the stethoscope too delicate to indent the vein, and appearing sufficient merely to transmit the vibration of the vessel or the rush of the passing current. The continuity of the sound, its occurrence in the external jugular, its easy obliteration by pressure, seem almost to demonstrate its *venous* origin. If it be granted the blood is in a watery state or thinner, and the parietes of the vessel lighter and more tense, there will be no difficulty in explaining the cause of the venous bruit or musical murmurs according to the known laws of sounding bodies: the vein may be likened to the string of a musical instrument in a state of high tension, vibrating more rapidly in consequence of the little resistance presented to its motion by the extremely fluid state of blood. This hypothesis is somewhat fortified by the fact that the slightest pressure on the vein, quite insufficient to stop the passage of the blood, effects a temporary cessation of the murmur. There would seem to be no good ground for believing that the attrition of the blood particles can yield a perceptible sound, nor that the flaccid vessels by their folds present obstruction to the current, and Laennec's theory of spasm acting must be baseless, the artery being in a state of diastole synchronously with the bruit, and it is not probable that the intermittent element of the venous murmur is derived from the impulse of the dilating artery against the vibratile vein. The succession of musical murmurs is accounted for on the common acoustic principles, that the sounds of a single cord are capable of spontaneous division into subordinate tones more powerful than the fundamental note. The same effect is producible by a touch, or some external influence, as of the stethoscope.

In regard to the most efficacious treatment, the author found it convenient to regard the murmur as occurring in three different conditions of system: with symptoms merely of dyspepsia, with amenorrhœa, and where there existed a blanched state of the cheek, gums, &c. in addition to the amenorrhœa or in consequence of some morbid poison. These divisions have no natural limits, but answer a practical purpose. Steel was found always injurious in the bruit with dyspepsia, increasing the headache, feverishness, and constipation, and destroying the appetite; whilst light diet, with small doses of salts, and exercise, very quickly restored the patient's health. When there existed slight amenorrhœa, small doses of steel, with a cooling saline, benefitted, but permanent recovery could seldom be insured without open air exercise. The selection of diet may be left to the patient's inclination. If a specific exists in medicine, it is steel, when judiciously administered, for amenorrhœa and chlorosis with venous murmur, and the author prefers the sulphate of iron in doses of one to five grains in a tumbler of cold water, rarely resorting to any other formula; purging and the correction of the hepatic secretions by blue pill appear rather injurious than beneficial in these cases. Hæmorrhage from nose, lungs, stomach, &c. usually termed vicarious menstruation, or hysteria, present little or no resistance to full doses of cream of tartar. Copious uterine secretion without blood globules is often mistaken for another form of leucorrhœa, and yields slowly to steel and exercise in the open air.

Dr. MUNK acknowledged the importance of the subject, and alluded first to the *cause* of the bruit; he considered that a watery condition of blood was necessary for a continuous murmur in the veins, which was also Dr. Hope's opinion: there was no fact more certain than that a venous bruit depended on a watery condition or want of red particles in the blood. In some experiments of his own, where fluids of different density, as oil and water, were passed through flexible tubes, the water caused a bruit, while the oil would not under exactly similar circumstances. The same takes place in disease as in chlorosis after hæmorrhage, and wherever a thinner condition of blood exists; if so, age would be of no real influence. He had not known venous bruit to occur at so early an age as mentioned by Dr. Silvester, but had heard it in a woman aged 76, where there was a perfect jugular bruit, and in this case there was found after death ulceration of the stomach and coronary artery; he had noticed it at all ages between these periods. In a case of a child aged five, under his care, he had obtained no good effect from steel, but on giving some oranges it immediately did good. In an adult drained by hæmorrhoidal discharge a bruit was present; it is also found in phthisis, if the *patient* is blanched: it never occurs in arteries or veins in a healthy state. The name *intermittent* bruit gives a wrong idea; it does not leave off entirely, but is aggravated from time to time, and should rather be considered remittent. As to remedies, Dr. Munk invariably gives iron, and prefers the muriated tincture, and considers no single indication requiring steel so certain as a *venous bruit*; where it fails, it often acts if country air be added. Purging is not required, and mercury is very injurious.

DR. SILVESTER, in regard to intermittent bruit, considered the vein was in a vibratory state; dilatation of the artery striking the vein caused this vibration. One bruit was heard in the artery itself of the same character, but not diffused. As to medicines, he had found ʒj. doses of Potass. Bitart., and simpler remedies, had effected cures. Steel was not always useful in the earlier stages: it did harm where there was not a pallid state. It might be suggested whether abortion might not at times arise from the fœtus not being supplied with healthy blood. In some cases, no doubt, a bruit existed before hæmorrhage took place, the latter appearing an effort of nature to get rid of a morbid fluid. In answer to Dr. Munk, he had heard bruit in typhus fever, and occasionally in Bright's disease, but only in the earlier stages. Venous murmur had been also produced by large bleedings.

Dr. **Ridge** did not agree with Dr. Munk's observations. He had often found that there was not any bruit in cases with watery blood, and was quite sure that iron is not a specific, especially where the digestive organs are out of order. When these are corrected by change of air, &c., iron does good. As to the cause, he thought a change in the venous tissue might have some effect; but he agreed with Dr. Munk as to its remittent character, as he viewed it as a continuous bruit.

Dr. **Hughes** did not consider venous murmur as at all important*, or in light of disease, but it assisted diagnosis. Was rather disposed to consider it due to irritability of the organ produced by the watery condition of the blood, and that a certain amount of pressure and of fluid passing through the vessel was necessary for its production. If pressure is used to a vein where the current is quick, a bruit becomes audible; and a continuous murmur never occurs without pressure or a particular condition of the heart. As to the administration of steel, there were states of the system and digestive organs which did not admit of its use, but which are remediedby air and exercise. In regard to the practical importance of the murmur, its existence often decided between an organic and functional disease of the heart. He believed it could be produced by a variety of causes, as pressure of the stethoscope, &c.; it will exist one time, and not another, depending on irritability of the heart itself. Dr. H. had never noticed it in persons with ruddy complexions, nor was it connected, except secondarily, with dyspepsia. In answer to Dr. Silvester, he had never heard it in phthisis, except conjoined with anæmial murmur over the aortic valves.

Dr. **Munk** referred to Dr. Latham's anæmial systolic bruit heard on *left* side, between second and third ribs, in incipient phthisis.

Dr. **Silvester** had also noticed a musical venous murmur on *right* side, between second and third ribs up to the clavicle, as a sign of phthisis. In answer to Dr. Hughes, he stated that he had met with bruit where the pulse was slow, 89, often at 75.

Thanks were then voted to Dr. **Silvester** for his paper.

Before the paper, Dewees' hook, alluded to by Mr. Crisp at last meeting, and a pair of forceps used by Dr. Lever for removing portions of retained placenta, were exhibited.

At the next meeting, November 26th, Mr. Searle will read a "Case of Serous Apoplexy," with remarks.

---

* There appears to be some error here in tne wording of the report.—*Ed. Gaz.*

Medical Trials and Inquests.

CIRCUIT COURT OF JUSTICIARY.—AUTUMN CIRCUIT.

Ayr, October 13th.

Charge of Childmurder—Examination of the body three weeks after death—Want of evidence from the condition of the lungs—Respiration inferred from the condition of the ductus arteriosus—Period of time required for the closure of the duct—Ecchymosis before and after death—Insufficiency of medical evidence—Remarks.

The following case will be found of great interest in relation to the subject of infanticide*:—

Helen Frith and Jean Harris or Frith were placed at the bar accused of the crime of child murder, in so far as, on 27th June last, within or near the house in High Street of Ayr, occupied by the said Jean Harris or Frith, they, or one of them, did wickedly or feloniously squeeze and forcibly compress, with their hands or otherwise, the neck or throat of a child to which the said Helen Frith had "immediately or shortly before" given birth, and did thrust a quantity of flax or wool into the mouth and nostrils of the said child, and did inflict some severe and mortal injuries upon the neck, or upon some other parts or part of the body of the said child, whereby the said child was murdered. The prisoners pleaded not guilty.

George Deas, Esq. A.D. conducted the prosecution. A. S. Logan, Esq. and John Millar, Esq. advocates, appeared for the defence.

The prisoners' declarations, after having been proved, were read. Helen Frith, in her declaration, denied that she had given birth to a child at the time libelled, or that she had been pregnant during the year preceding. She admitted, however, that from ill health, her person had increased in size, and given her the appearance of pregnancy. She had consulted medical men as to her state, and taken medicine for the cure of her complaint. On the night libelled her illness reached a crisis. The tumor or swelling, which had caused her illness, gave way, she suffered much pain, and lost a large quantity of blood; but, after a day or two, she recovered. Jean Harris or Frith, in her declaration, denied that her daughter Helen had, to her knowledge, at the time in question given birth to a child. She was not aware Helen had been pregnant, but she knew that Helen had suffered for some months from a swelling which increased her size. The swelling broke at the time and under the circumstances mentioned in the declaration of Helen.

---

* This important case, for a correct report of which, taken from the Caledonian Mercury, we are indebted to a friend in Edinburgh, has been nearly four weeks in hand. We regret that we have not been able to find room for it before.

Thomas M'Crase, weaver, Ayr—Knew the prisoners. Kept company with Helen from about August 1845 till the beginning of December in that year. Helen told me several times in the course of that period that she was in the family way by me, and I made no denial. Saw Helen about three weeks after last new year in her mother's house. She had been complaining for a fortnight previously. When coming away she followed me to the door, and said she had lost a child. From this, I understood she had had a miscarriage. Her mother called her in from the cold as she spoke to me. *Cross-examined* by Mr. Logan—Helen was looking very ill at the time I called on her after the new year, pale, and weakly. Of my own knowledge, I knew she had been ill.

William Craig, surgeon, Ayr—Helen Frith called on me some time in May last, on account of illness. She complained of swelling in the abdomen and legs. She said she suffered from dropsy. On examining in a general way, I found that the swelling arose neither from wind nor fluid, but from solid matter; and I said to her I feared she was with child. This she denied; but she readily consented to a more particular examination, the result of which was the corroboration to the fullest extent of my first impression. She persisted in her denial; and said if I would not give her medicine to take away the swelling, she would go to another who would. I cautioned her to be careful what she said; as it was hazardous to conceal pregnancy, and she would have to answer for anything which happened to the child before or at her confinement. *By the Court*—Have no note of the time when Helen called; but think it was three weeks before I expected her to be confined. My impression still is, it was in May she called. She complained of dropsy, but asked for some particular medicine. She also complained of a particular kind of illness, and asked for medicine to correct that. I had seen pannel earlier than May; and from what I saw then and before, I had no doubt she was pregnant.

James L. Crawford, M.D. Ayr, examined Helen Frith on 2d July last, along with Dr. Mitchell. We drew up a report, which was to the effect that from the appearances presented on examination, we were satisfied Helen Frith had borne a child a few days before. *By the Court*—There was one of her symptoms mentioned in the report which could be accounted for in no other way than that the pannel had been delivered of a child.

George Mitchell, surgeon, Ayr, corroborated the statements of Dr. Crawford.

Mary M'Neill, daughter of James M'Neill, quarrier, Ayr, aged twelve years—Found something in the Bents last July, on the Friday of the yeomanry review. It was on part of the town shore, half way up the Common Green, near where the plasterers mix the lime. I was coming along, when something burst up from the sand under my feet. It was in a pock. I called to a woman, Hutcheson, to come and see what had cast up; and she, on seeing it, told a boy who happened to be passing to shake the pock, that they might see what was in it. He did so, and the body of a child came out. Hutcheson and I then went off to the officer, John Young.

Elizabeth Hutcheson, washerwoman, Ayr—Her statements in all respects were the same as those of last witness, only she added that the pock had a very heavy and offensive smell, and that this was the reason she called the boy to shake it. The body showed evident symptoms of decay. The skin was a sort of greenish blue, and some matter of some kind or another was oozing from the head. The sight somewhat stupefied the witness.

Robert Dunlop, joiner, Prestwick, was called by Hutcheson, the last witness, to come and see what had been found on the sand. Went forward, saw a striped woollen pock—on shaking which the body of a child appeared. The body was much decayed, and had a very heavy smell.

John Young, town officer, Ayr, was shown the body when found, and took it to the hospital, with cloth and pock in which it was found. Drs. Crawford and Mitchell were then sent for, and the body given in charge to them. The body was so nauseous and offensive, that it had to be washed. Searched prisoners' house same day for cloth the same as bag, but found none. Showed it to elder prisoner, to whom I said I was searching for "evidence to corroborate with the bag." Searched also for a cushion, but found none. *Cross-examined*—Searched house on two occasions—4th August, and 17th July. It was on the first occasion I had bag with me. Showed the elder prisoner the bag, when she said she knew nothing about it. It was on this I said, we would try and find something to corroborate it. Found nothing. The body was in a putrid and highly offensive state. Emitted a highly offensive smell. Discoloured. Skin was coming off, and part of skin adhered to the bag. *By the Court*—There had been a tract of extremely wet weather before the body was found. There was no sand at the place where it lay.

Dr. Crawford recalled—Made examination

of the body of the child brought to hospital, along with Dr. Mitchell, who drew up a report thereon, in which I concurred. The report is dated, 17th July 1846, and is as follows:—

"Ayr, 17th July, 1846.

"We, the undersigned, do hereby certify, upon soul and conscience, that we have examined the body of a female child, and found the following appearances:—On inspecting the body externally, we found it in a state of putrefaction, with desquamation of the cuticle. It weighed five pounds, and was twenty inches in length. Its mouth and nostrils were stuffed with flax. The umbilicus was in the centre of the body, *the cord cut close to the abdomen, and left without a ligature.* The scalp was covered with hair, and the nails were full grown. There was an extensive ecchymosis all over the fore part of the neck, and an effusion of blood on the exterior aspect of the trachea. The heart and lungs weighed one ounce, the latter of which were collapsed, the right being considerably decomposed, and sank when put in water. The left was of a red colour, firm in texture, and floated on the surface when immersed in a vessel filled with water, but *on pressure there was no crepitation.* The right side of the heart was filled with coagulated blood, the *foramen ovale partly open, and the ductus arteriosus impervious.* The liver was large, and of a leaden hue, the *ductus venosus almost obliterated.* and the meconium found in abundance in the lower bowels. We are of opinion, from the perfect conformation of the child's body, and the above mentioned appearances, that it had life at birth, which (appearances) we consider quite sufficient to account for death.

(Signed) "James Crawford, M.D.
"Geo. Mitchell, Surgeon,"

Report says there was "*desquamation of cuticle.*" This means that decomposition had gone so far that the skin could easily be stripped from the substance beneath. The weight of the body was five pounds, the ordinary weight of a new-born infant is seven pounds; but when the body was found, a portion of the brain, which had been reduced to a pulpy state, and escaped through the openings of the skull, was wanting. All the appearances on the body led me to believe the child had been born at its full time. As to this I have no doubt. Ecchymosis in this case could not have occurred *after death.* It must have been the result of external violence during life, which might have been inflicted by the hand. The appearances on the neck were quite sufficient to account for death. The stuffing of the mouth and nostrils with tow or flax could not have been accidental, for considerable force was required to withdraw it. This stuffing of the mouth and nostrils, if done when the child was alive, was quite sufficient by itself to cause death. *Cross-examined*—The report is dated 17th July, for it was on that day the body was first seen by Dr. Mitchell and me, but the *sectio* was not made till the 18th. The body had to be washed in a solution of chloride of lime before the *sectio* could proceed, as it was in a very putrid and offensive state. Supposing injury done to the neck of the child immediately after death, the appearances spoken to would not have been present. Supposing there had been no assistance at the delivery, I do not think that the injury in question could have been inflicted by the mother in an effort to assist delivery. The chin would, in such a case, protect the neck. Besides, the mark on the body found was on the fore part of the neck. If injury had been done by the mother during birth, the marks would have extended around the neck. The ecchymosis was produced by the rupture of some small blood vessels; and supposing that rupture to have arisen from mechanical deficiency, the ecchymosis would not have been such as appeared on the body examined. There must have been violence to produce that. The ecchymosis arises from suffusion; and without violence suffusion would not take place. In some cases the *ductus arteriosus* closes days after birth; in others in weeks; and in a third class of cases within twelve hours even. Beck mentions one case in which that duct was closed in a day. Though the child die 24 hours after birth, the *ductus arteriosus* may have closed in that time. I have either read or heard of a case, in which on a *sectio* the *ductus arteriosus* was found impervious when the child had died within *six hours* after birth; and the same remark applies to the obliteration of the *ductus venosus.* The closing of the *ductus arteriosus* in some cases is *an act,* though not universally. It is the opinion of medical authorities in general, that the closing of that duct is a *process,* though in some instances it has happened in so short a time as to be called an act. (?) *By the Court*—From the state of the body I could not say how long it had been dead. The space could not be more than a month; it might be less, (20 days). Saw nothing to render it unlikely that death had occurred only a fortnight or three weeks before. A portion of the brain had been lost before the body was found, and more escaped before the *sectio* could be made. On opening the skull-cap the base of the brain was all which remained; the two hemispheres were gone. In a natural presentation, the head of the child would defend the neck from injury during the birth.

George Mitchell, surgeon, recalled—Drew out report of 17th July, with Dr. Crawford, which is a true report. The appearances of the child's neck will account for its death. They must have been caused by external injury or pressure applied during life. The stuffing of the mouth and nostrils could not be accidental; for there must have been some force in the act. *The child, without doubt, had been born alive. Cross-examined*—The child was a female child. The average weight of a newly-born child is about six pounds. Could not say the weight of such a child's brain. An adult's weighs two pounds; an infant's of course much less. The body externally was considerably decomposed, particularly abdomen and brain. A large portion of the brain had escaped. When the body is putrid, its state is unfavourable for observation of appearances as at death. The skin here was of a dirty yellow colour, inclining to greenish—ordinary putrid colour. The ecchymosis on the neck must have arisen during life. Too much blood suffused to be accounted for by sugillation. The blood of a young child is more fluid or watery than an adult's, but could not say whether more apt to suffuse from lesion. The length of time an infant's blood remains fluid after death depends on the atmosphere. Heat hastens decomposition. The *ductus arteriosus*, as stated in the report, *was impervious*. In some cases a considerable time elapses after birth before that happens; in others it occurs in less, but could not specify a particular period, because *I have not dissected with a view to that inquiry*. The same remark applies to the *ductus venosus*. *By the Court*—I do not consider any suffusion after death as ecchymosis. There is a shade of difference betwixt the two. Ecchymosis proper cannot occur after death; though, if vessels are torn just after death, blood may be suffused. The mark on the neck of the body we examined, was ecchymosis proper.

Isaac M'Dougall, hawker, Ayr—Lodged same time in elder prisoner's house; went in January last, and remained till apprehension of prisoners. I noticed the state in which Helen Frith was during that time, and asked her whether the report that she was pregnant was true. She denied the imputation. This happened about two months after I went to the house. I used the freedom of putting such a question because I had prospects of marrying her. Spoke to Helen again on the subject the Thursday before she was apprehended. She was then to all appearance pregnant; but she denied as before. The house consisted of one apartment and a closet. There is an outside stair leading to a passage, on the left-hand side of which, as you enter, is the closet, and at the end of which, a few feet farther on, is the sitting and sleeping-room. In the latter there are two beds; the head of the one being towards the head of the other, and the passage goes out between them. They are thus separated by three or four feet. I slept in one of the beds, and mine is farther back than the other. A boy slept with me. The prisoners slept in the other bed, and a younger boy with them. I was confined to bed part of the Friday and Saturday before the prisoner, Helen Frith, was apprehended. On that Saturday morning, just when day had broken—about three o'clock—I awoke, and saw the prisoner, Helen, walking up and down the room. She continued so for some time; and then came to a stand before the window. She clasped her hands and gazed out of the window a while. She was dressed in a blue and white spotted wrapper, and had a cap on. The wrapper appeared loose about her, as if there was no under clothing. She again began to walk through the room, and to moan heavily, appearing to suffer much from pain. She was biting her fingers. After this I fell asleep, and did not wake again till a little before the six o'clock bell rung. The first thing I heard this time was Helen's brother, Joshua, who slept in the same bed with her, speaking to her, and reprimanding her for weeping. On this his mother, the elder prisoner, said he was very unfeeling, as Helen had passed a very poor night. His mother told him to get up, and go to his work. He obeyed. After Joshua went out, I heard Helen moan heavily again. Then the mother got up. It appeared to me as if Helen was in bed, but I did not see. Helen's moans were as half suppressed. After her mother got up, she went across the room to a press opposite their bed, took a key from the shelf, and opened with it the closet door. She went into the closet, and remained there some time. When the elder prisoner was in the closet Helen's moans increased, and at length she cried "Mother, mother, come here." Her mother came and remained two or three minutes, when I heard her say, "My God! what am I to do with this?" Two or three minutes after the mother went to a wall press opposite my bed, and took down a white bason, with which she went back to Helen's bed, remaining there a minute or two, after which she went into the closet. As she was going, I heard something like the cry of a child. I could not determine whether or not it was the cry of a child; but I was rather inclined to think it was. It was a weak and stifled cry. It had no resemblance to the cry of a grown child; but something of the nature of an infant's cry. The elder prisoner remained five or ten minutes in the closet, when she went in the second time. I do not know whether she shut the door when she came out. Helen moaned or mourned after her mother went out, but grew gradually calm; though in what time I could not say. I got up betwixt nine and ten. Helen was then in bed. I do not recollect whether I asked her anything, but she looked very much exhausted. The mother left the house betwixt ten and eleven. Before doing so she went to a chest, from which she took a shawl; then she went into the closet, from which she took a green painted can. She was away from three-quarters of an hour to an hour, and when she came back she had the pitcher with her filled with sand. I said to her she had been at the shore for sand, and she said she had. Helen was still in bed. I had suspicions at the time. On the Sunday, I drew near to Helen's bed-side, and asked her how she was: she said, better. I asked her how the swelling was: she said, "better, and so it may." I added, "Yes, and so it may." She was apprehended on the following Thursday. On that night the elder prisoner said to me—"I was sure no child was born in the house;" to which I answered, she was not aware of what I could say on the subject. I was not inclined to say much at present. The subject was renewed next day, when she repeated that I knew nothing. Upon this I deemed it my duty to tell her all I knew; which I did accordingly. On hearing my statement she said, lifting up her hands—"My God! if you tell that, it will run hard with Helen Frith." She neither denied nor confessed. She said, however, that Helen might have had a child; but, if so, she (the mother) knew not of it. Being shown the striped bag in which the body was found, I repeat now what I said before. I have seen this, or something exactly the same, in the prisoner's house. It was used as a cushion. Were it in simple conversation, I would say I had no doubt of the identity, but, being on oath, I decline to speak positively. Up to the Sunday night, the cushion, with the striped cover, was in the house; but after that I never saw it. *Cross-examined*—Joshua was a boy of 14 or 15; and he worked with a Mr. Gordon. His usual time of going to work was six o'clock. Joshua slept on the Monday night in the same bed as his mother and sister. Another brother, Robert, slept with me. He lay to the back of the bed. I said nothing to him as to any thing I saw or heard. I slept no more after wakening at six o'clock. Robert got up before me, if I remember rightly. When Helen's mother went out with the can, I was sitting on a chair near the fire-place in such a way that I could see her pass out. The can now shown is the one referred to. I cannot say whether anything was over it when her mother took it out. She was in the habit of going for sand for the floor; but cannot say on what day of the week she usually went. *Re-interrogated* by Mr. Deas—Cannot say whether Mrs. Frith was carrying anything under her shawl when she went out.

Henrietta M'Dougall, *sister of last witness, corroborated her brother's statement*, that Mrs. Frith went out on the Saturday morning carrying a pitcher; and that after being away about an hour, she returned home with the pitcher full of sand. Heard also her brother say to Helen, when Mrs. Frith was away, that her illness had got a turn, to which she assented. He asked what had made her cry or moan through the night, to which she answered—rheumatism in the loins.

Margaret Wallace, residenter in Ayr—Lived butt and ben the house with Mrs. Frith. Saw Helen after last spring and summer, and noticed that there was something unusual in her appearance. She seemed to me to be in the family way. On the Saturday forenoon before Helen was apprehended, I met her mother opposite Mr. Nicoll's shop in the High Street, carrying a green pitcher. She had on a tartan shawl. Can't say whether she carried any thing beneath it. Can't say whether the striped bag shown me is the one the Friths used as a cushion, but I have seen one in their house the same. *Cross-examined*—The High Street is the most frequented street in Ayr, and plenty of people in it on the Saturday forenoon. There was no lid on the can Mrs. Frith had; and she was carrying it quite openly before her. Mrs. Frith uses sand for her house. Saturday is her cleaning day.

Similar evidence to that of last witness was given by four other witnesses, all neighbours and acquaintances of the prisoners; and this additional circumstance was mentioned by one of them, that on the Monday before Helen's apprehension, Mrs. Frith was seen carrying out of her house a tub, in which there was water coloured as if with blood; while pieces of what seemed clotted blood were seen the same day lying on Mrs. Frith's midden.

Donald M'Donald, Superintendent of Police, corroborated Young the officer, as to the search of the pannel's house. The examination of this witness closed the case for the Crown.

Mr. Logan adduced as witnesses in exculpation—

Dr. Haldane, surgeon in Ayr—Has been in practice six years and a half in Ayr, and twelve years elsewhere. Has had occasion to study the appearances presented by the bodies of children after death. There is a vessel known as the *ductus arteriosus* in the fœtus. It carries the blood from the pulmonary artery directly into the aorta, keeping it from the lungs. Its function is essential before birth; but after birth that function ceases, as then the blood is sent into the lungs. After birth, the function of the vessel being superseded, the vessel itself changes its character. It gradually becomes impervious; very rarely indeed continuing patent. If called to examine the body of an infant, and if, on dissection, I found the *ductus arteriosus* closed or *impervious, I would infer that the child had lived at least twenty-four hours.* The time the duct closes is very variable; but the shortest recorded, or of which I have heard, is 24 hours. Dr. Billard of Paris is considered by the profession to have made the most accurate observation on the subject; and he states in his work that only in one instance out of 18 cases he had examined, was the vessel in question closed at the end of one day after birth. In like manner, if I found the *ductus venosus* obliterated, I would infer that the child whose body presented that appearance had lived a considerable time, a day or days at least. It is generally obliterated before the *ductus arteriosus* is closed; and is so generally in two or three days. If I had seen in a case what is stated in the report by Drs. Crawford and Mitchell as to the body found on the shore, I would have concluded that the child had not died before the end of 24 hours from its birth at soonest. Ecchymosis is the effusion of blood into the cellular membrane. The blood of an infant does not coagulate so rapidly as that of an adult, and extravasation more readily takes place. Ecchymosis is sometimes used to express discolouration from *post-mortem* injury. Whether that mentioned in the report above referred to was produced in life or after death, I cannot pretend to say, for I did not see the blood. But ecchymosis *might be* produced after death which couldn't be distinguished from that produced in life. A medical man's facility for examination is very much impaired in a body so far decomposed as the one in question obviously was; and as to the appearances in its neck, it must be borne in mind that the neck is one of the parts most subject to decomposition.

Dr. Craig, surgeon, Ayr, recalled. Has had considerable experience as an accoucheur, and full opportunities of observing the appearances of children after death. If on examining the dead body of a child I were to find the *ductus arteriosus* impervious, I would conclude that the child had lived four or five days. There is one case mentioned by Billard, where it was found impervious though the child had lived only 24 hours. If the *ductus venosus* were obliterated, I would infer that the child had lived two or three days. In certain cases—as where the irculation was vigorous before death, and suddenly stopped, ecchymosis may be produced by violence after life is extinct. In a newly born child the circulation is vigorous, and ecchymosis may be produced on its body immediately after death. *Cross-examined* for the Crown. In order to enable me to tell whether an injury was inflicted before or after death, I would require to see the body. *By the Court*—Ecchymosis in a newly born infant's neck may be produced by pressure.

This closed the evidence for the defence. Thereafter the Jury were addressed by Mr. Deas for the Crown; and by Mr. Logan for the prisoners. Last of all, the Justice Clerk charged in his usual full, able, and impartial way. When his Lordship finished, the Jury retired to deliberate. They remained out of court nearly half an hour; and on their return they "found that a child had been born by Helen Frith; but that the murder charged was *not proven*." The Court expressed its concurrence in the verdict. The case lasted nearly eight hours; and excited the greatest interest throughout.

REMARKS.—Neither the legal nor the medical facts of the above case are sufficiently clearly "proven" to admit of any very exact commentary; thus it is not absolutely certain that the accused female was actually delivered of a child at the precise time at which the evidence of the witness M'Dougall would lead every one to infer that her accouchement occurred. This witness could not positively swear whether the sound which he heard on that occasion was or was not the cry of a child,—of course a most important link in the chain of evidence. The fact that the discovery of the body of an infant in a bag, which M'Dougall believed, but would not swear, had belonged to the accused parties, was certainly no absolute proof that the body found in the "Bents" in July, was actually that of the infant with which Helen Frith was believed by Mr. Craig to be pregnant in May, and of which the evidence of Dr. Crawford shews that she was delivered a few days previously to the 2d of July. Besides this, there appears to be a point of great uncertainty with reference to the period which the child whose body was exhumed had survived birth. Independently of the other facts elicited in the post-mortem examination, the circumstance of the mouth and nostrils having been forcibly plugged with flax, affords the strongest evidence that the child had lived and breathed, and had been wilfully destroyed; but a doubt seems to exist with regard to the condition in which the umbilical cord was left immediately after birth,—whether it was divided close to the abdomen as soon as the child came into the world, or whether the cord was left untied and undivided for a longer or shorter period previously or subsequently to the death of the infant, or whether a ligature was not at first placed on the cord, the placenta being subsequently removed by division of the funis between the ligature and the abdomen. These are doubts which render it extremely difficult to argue upon the question of the date of the closure of the arterial duct in this case. Several circumstances might lead to the belief that the funis of this infant was tied at its birth, and not divided near the abdomen until subsequently to its death by suffocation; these are as follow. Had the funis been at once "cut close to the abdomen," it would, in all probability, scarcely have been found necessary by the criminals to use the violent measures of stuffing the mouth and nose, and of compressing the trachea, for the purpose of hastening the death of the child. Had the infant previously suffered the hæmorrhage which would result from a clean division of the unligatured funis cut near the abdomen, it is not very probable that any ordinary degree of pressure would have been followed by "an extensive ecchymosis all over the fore part of the neck, and effusion of blood on the exterior aspect of the trachea." The witnesses appear to have forgotten that marks of ecchymosis are sometimes accidentally produced on the neck by the forcible bending of the child's head forward after death. It is in all cases very difficult, after the lapse of three weeks, to give an opinion whether such an ecchymosis did or did not occur during life. The full state of the right ventricle of the heart renders it probable that death was produced by asphyxia, not by hæmorrhage. It would have been important to ascertain whether the vascular system generally, appeared to have been drained of blood; this would most probably have been the case had the umbilical cord been divided previously to death, in the manner described.* The deficiency in weight of the infant was not a point of much importance, as indicative of its age, as this may have been due either entirely to the loss of cerebral substance, and to the draining of fluid which would probably occur from the open umbilical vessels in an asphyxiated infant buried shortly after death, or partially also from original defect of weight, which would be especially likely to occur in a child which was the subject of any congenital cardiac malformation. The small size of the lungs (which, together with the heart, only weighed an ounce) rather favours the idea that there existed some congenital defect in the heart or large vessels. Unfortunately it is not mentioned whether the heart and its vessels were or were not in a normal condition: hence a main clue is wanting to the elucidation of the question, whether closure of the arterial duct occurred before or after birth. Standing alone, the fact of the foramen ovale being described as only "partly open," (an expression which appears to convey an idea that the opening was partly closed), appears rather to favour a belief that the closure of the arterial duct had occurred subsequently to birth; but the existence of an imperfect state of the ventricular septum, or a contraction of the pulmonary artery, or the presence of any unusual communication between the aorta and the pulmonary artery, would have given an entirely different aspect to the case. Whether the duct may become closed a short time previously to the termination of the full period of gestation is doubtful; yet it would be extremely unsafe to declare that closure of the vessel at such a period cannot possibly occur; and it is now proved that infants may come into the world without being furnished with any trace of an arterial duct; as also that complete closure of the foramen ovale is occasionally effected previously to birth. These anomalies are, however, as might be expected, usually attended with certain other deviations from the natural condition in other portions of the heart and its appendages. As a matter of probable conjecture, we are inclined to believe that, providing the duct had really become closed by an organic process, the process in question must have been either completely or nearly accomplished previously to the birth of the child, the duration of whose life probably did not exceed a few minutes, and (admitting for an instant, from the inferences deducible from the entire train of facts and suppositions adduced by the witness M'Dougall) which cannot be supposed to have lived more than five hours at the utmost. Whether it is probable that, during such a period as this, and under the at best extremely unfavourable circumstances in which this wretched infant must have been placed, an organic process which usually occupies at least twenty-four hours was at all likely to be completed, is a question which we believe few physiologists will hesitate to answer in the negative.

In general, the closure of this duct, under natural circumstances, is dependent on the perfection with which the respiratory process has been carried on after birth; the full and free establishment of the pulmonic circulation rendering the passage of blood through the duct unnecessary. When, therefore, we find the signs of respiration in the lungs so imperfect as they were in this instance, we should be exceedingly cautious in relying upon the closure of the duct as certain and absolute evidence of the child having been born alive and breathed. But, so far as experience goes, respiration must be continued for some hours, in order that the duct should become naturally closed;

---

* We take it for granted that the expression used in the report, "cut close to the abdomen," is an evidence that the appearances of the part were such as to enable the surgeons to state positively that the funis had been divided by a cutting instrument, and not separated by rupture or torsion.

and on this point there was a complete failure of proof.* We cannot conclude without commending the evidence given in the defence by Drs. Haldane and Craig. There was a want of clear medical proof, from an inspection of the heart and lungs, that this child had been born alive; and, except from moral circumstances, and from the fact that foreign substances were found stuffed in the fauces, we are at a loss to understand how the medical witnesses for the prosecution could have felt themselves justified in positively swearing that "the child, without doubt, had been born alive." The state of the lungs afforded no grounds for such an opinion; and the inference drawn from the condition of the ductus arteriosus, appears to us not to have been warranted by the circumstances.

The moral evidence, admitting the identity of the child to have been made out, was certainly strong against the accused; and the verdict of "*not proven*" was, therefore, just and proper. The Scotch law draws an important distinction between those who are *morally* and those who are only *legally* innocent of a heinous crime; and it would be a great improvement in our jurisprudence if this form of verdict were imported into it. In our remarks on this case, we have endeavoured, irrespective of the question of guilt or innocence, to examine the evidence in a medical point of view. The case is one of the most important, in relation to infanticide, which has for many years been tried in Great Britain. It has brought to a close issue the value of one modification of Bernt's test—(the *docimasia circulationis*), as it has been proposed to apply it in charges of child-murder; and we think that it has signally failed to answer the purpose intended. It is clear that other causes may lead to the arterial duct becoming impervious, independently of the establishment of the respiratory process; and the facts proved in this case will, we doubt not, teach medical witnesses to be hereafter extremely cautious in relying upon a mere closure of the duct, irrespective of the condition of the lungs, as an absolute proof that the child has breathed.

Correspondence.

ON OSSEOUS UNION OF THE FRACTURED NECK OF THE THIGH-BONE.

SIR,—In the report of the first meeting of the new Pathological Society which appeared in one of your recent numbers, there is a short description of a specimen of "Fracture of the Neck of the Femur (?)" which Mr. Liston had no hesitation in regarding as "one of interstitial disease so frequently consequent on injuries of the hip unattended with fracture."

It appears, sir, that some years ago some high authorities in surgery pronounced that a fracture of the neck of the femur never can be united by bone; and after that of course it has no right to become thus united. It is impossible to prove that osseous union of this fracture ever takes place if the fact of osseous continuity is taken, without hesitation, as evidence that no fracture had occurred. In the present instance, "the head of the bone was directed more posteriorly than usual." "the neck much shortened *behind*;" in fact, the shaft of the bone was rotated outwards, whilst the head was in its most usual position; the foot, it is stated, was slightly everted. The patient, 79 years old, fell down stairs on his left hip, and could walk with crutches eleven months afterwards; that is to say, as I infer, he was not lame until he fell down stairs, and could not walk at all afterwards, until eleven months had elapsed. What can be stronger evidence of a fracture having occurred than that which is presented in this description and this history? In order that the head of the femur should be approximated behind to the trochanter, as here described, the neck must be bent suddenly in a manner which never occurs in any bone without fracture. It must be bent *suddenly*, because the neck of the thigh-bone is not long enough to allow of a gradual bend being perceptible.

---

* The entire closure of the duct as a natural process in a normal condition of the heart and blood-vessels, takes place much more slowly than the evidence for the prosecution would imply. Prof. Bernt, of Vienna, who has made numerous researches on this subject, has come to the following conclusions respecting the closure of the ductus arteriosus in children which have lived after birth:—

1. If the child has lived only a *few seconds*, the aortal end of the duct appears contracted, and the vessel, instead of being cylindrical throughout, acquires the form of a truncated cone.
2. If the child has lived for *several hours*, or a *whole day*, the duct becomes again cylindrical, although shortened, and contracted in diameter. Its size is about equal to a goose's quill (?); it is, therefore, much smaller than its root; and about as large as either of the two branches of the pulmonary artery, which have, in the meantime, become increased in size.
3. If the child has lived for *several days*, or a *whole week*, the duct contracts to a diameter of a few lines,—about equal to a crow-quill, while the two branches of the pulmonary artery are equal in size to a goose's quill.
4. The duct is met with perfectly closed, and quite impervious, at a much later period; *i. e.* after the lapse of a very uncertain number of weeks, or even months.

Among the exceptional conditions, Bernt remarks that the contraction may be first observed at the cardiac instead of the aortal end. In one instance of a still-born child which was resuscitated and breathed feebly for a short time, and in which the thymus gland was absent, the duct was found of the size of a crow-quill, as in children which have lived several days. He also states, on the authority of Joseph Schallgruber, that the duct is sometimes entirely absent.—*Das verfahren bey der gerichtlich-medicinischen Ausmittelung Zweifelhafter Todesarten der Neugebornen, von Joseph Bernt*, S. 67, *Wien*, 1826; also, *Systematisches Handbuch der gerichtlichen Arzneikunde*, S. 275, *Vierte Auflage*, *Wien*, 1834.

We have here given the conclusions of Professor Bernt, in order to show that the natural closure of the duct is a very slow process. The conclusions are open to many more exceptions than those admitted by the writer; but neither in his works nor in those of other authorities on medical jurisprudence, do we find any case which shows that the duct can become quite impervious from natural causes in a child which has lived only a few hours. We are, therefore, rather inclined to believe that an abnormal was here mistaken for a normal condition of the duct.

There are several specimens of osseously united fracture of the neck of the femur in the museums. There is one in the Hunterian collection, of which a horizontal section has been made, where the evidence of fracture is perfectly incontestable, the outline of the fragments being indicated in the united bone with the greatest accuracy by the dense structure of their formerly external plates, now internal from displacement, and by a line similar to that which indicates the point of union of an epiphysis to its shaft. In this, and in all the other specimens of union of the fracture in question, the head of the bone and the great trochanter are very much approximated behind, a position which indicates action of the great mass of femoro-pelvic muscles, and consequent transmission of pressure through the fracture.

By examining carefully a vast number of united and ununited fractures in the bones of man and of brutes, I have come to the conclusion that the agent which determines the reparative lymph to assume the form of bone is pressure or compression transmitted through it, whilst tension determines its metamorphosis into a fibrous structure. In most fractures the former of these agents is present either as a result of the gravitation of the body, or of muscular action. In fractures of the patella, olecranon, calcis, &c., the latter is present: in fractures of the skull wherein the fragment is not completely detached, neither is present. The results in each of these cases are well known. If any pressure is transmitted through a fracture of the neck of the thigh-bone, it must be the result of the action of the femoro-pelvic muscles, which rotate the shaft outwards, and pull it upwards, producing the relation of parts present in the specimen exhibited. If a patient be suspended by the leg, or stretched out with the long splint, there will be tension on the fracture, and consequent fibrous union; if he be left to himself, and lies in bed, there will be pressure and rotation outwards, and union will ensue: if he walks about, *as a patient at present* under *my care did, there will be* alternation of pressure and tension, and consequently a false joint. The reason, then, that osseous union of fractures of the neck of the femur does not take place is, that a necessary agent, pressure, is absent in most cases, owing generally to the treatment adopted; such, at least, is my conviction, deduced from the examination of very numerous specimens, and a good number of cases. My views on this subject were stated to the Medical Society of King's College, London, in a paper "On the Repair of Bone," which I had the honour of reading before that society last winter.

I trouble you with these remarks, because the summary, "without hesitation," and without why-and-wherefore style, adopted by older pathologists, is exceedingly cruel towards the pathological researches and reasonings of "Young Physic." For instance, if argued against in this style, I shall never be able to prove the truth of these notions to others, which I hope in time to do, nor shall I thus ever be made to see that they are erroneous, in case they are so.

SIMON ROOD PITTARD.

1, Lamb's Conduit Place,
Nov. 9th, 1846.

ON THE MORTALITY OF CHILDREN, AND THE INCREASE OF POPULATION.

SIR,—Having done me the favour to give a place in your influential journal to my recent communication respecting the diminished virulence of small-pox in England and Wales, owing to the protective efficacy of vaccination, I now beg to point out another feature exhibited by the tables contained in the last Annual Report of the Registrar-General; namely, the great mortality which occurred during 1844 amongst the children resident in London. According to that official document, 51,110 persons died in the metropolitan districts, of whom not less than 20,650, or 44 per cent., were children under five years of age, being, in fact, two-fifths of the whole deaths recorded during that year. Without exaggeration, this large proportion of deaths amongst young people appears frightful, and implies, to say the least, great neglect or improper treatment on the part of their natural protectors. Although it is not so much my intention at present to explain these results, as to direct the notice of the profession to the facts now quoted from the above authority, I may, however, observe, that improper feeding, defective clothing, especially in this variable climate, badly ventilated dwellings, unhealthy localities, filth, poverty, and destitution, materially contribute to produce them, and if more care were taken in future to remove, or even diminish the influence of these common and prolific sources of disease, much benefit would thereby supervene. To shew that such causes affect the rate of mortality amongst children, it is only necessary to state, that in the parish of St. George, Hanover Square, where 744 deaths are reported, 232, or 31 per cent., were under five years of age; whilst in Lower Westminister, (that is, St. John's and St. Margaret s parishes), in 813 deaths, 367, or 45 per cent. were also under five years of age; whereas, in St. Giles's, Bloomsbury, in 700 deaths, 426, or 60·80 per cent., were in children who had not completed their fifth year. Unwilling to occupy too much of your valuable columns, permit me, nevertheless, to remark, in reference to the rate of mortality and population, that 140 persons, on an average, die every day in London, whilst 176 are born during the same period of time, so that the capital receives an addition of 36 individuals per diem to its inhabitants. Again, throughout England and Wales, 1,481 persons are born daily, whilst the deaths are only 977; whereby 504 individuals, irrespective of immigration, are added each day to the general population. Viewing the question in another light, it may be said, that in England and Wales, one person is born per minute during the entire year, whereas only one death takes place every minute and a half: this circumstance will explain, in some degree, the great annual increase recently noticed in the inhabitants of South Britain. Should the same ratio of births to deaths continue, and there is no reason to think otherwise, provided the supply of food be ample, (obtained of course from other countries), England may, perhaps, in time become, as some political economists have seriously asserted will be the case, not a country comprising towns and villages interspersed with fields, but actually one immense metropolis.

MEDICUS.

November 14th, 1846.

⁂ Why does not our correspondent attach his name to his interesting communications?

ON THE TREATMENT OF CALCULUS IN THE FEMALE.

SIR,—The case of lithotrity on the female, published in the GAZETTE of the 6th inst.* which was followed by the death of the patient, makes it very decided on my mind, that death would not have been nearly so likely to have ensued had the old operation been performed.

Having myself opened the bodies of many persons who have died after having calculi in the bladder many years, I have always found this organ excessively contracted, very often not able to contain an ounce of urine; while the pelvis of the kidneys and also the ureters were enormously dilated, acting as the reservoirs of the urine, while the coats of the bladder are homogeneous, very thick, and tough, and quite unelastic; which circumstance will, I think, account for the pain experienced by Mr. Crawford's patient, on his endeavouring to inject the bladder, better than supposed irritability.

Some years back I attended a female who had been previously operated on by the dilator, and by crushing the stone, by a surgeon here of great practice and good reputation. The stone was crushed after repeated painful dilatations. The result in this case was sloughing of the vagina, and a communication between it and the bladder, and I think the rectum communicated with the vagina also. This female suffered in the most horrible manner for a few years, and died from the effects of the operation.

This poor suffering patient was averse to any kinds of examination when I attended her, the parts being so tender, and therefore I did not press it, feeling persuaded that I should not be able to afford her any relief. I was not permitted to examine her after death, but from repeated conversation with her and her friends, I was quite satisfied that she was in every other respect, except suffering from the calculus, a sound and healthy woman, of about 40, previously to the operation of lithotrity.

I have myself performed the operation on the female twice: once on a young girl of about six. Here I endeavoured to dilate the urethra with strong tents, and not being able to effect the dilatation sufficient by that means, I tried a dilator: the pain produced was so excessive that I thought it prudent to desist. Afterwards I performed the operation in the usual manner without any difficulty, and extracted a stone of moderate size, and the patient did well, but could not retain her urine for a long time. She was beginning to do so when I lost sight of her. The stone was a triple phosphate, and she continued to pass large quantities of the phosphates in the form of gravel for a year or two afterwards, her vagina, and even the labia, being, as it were, plastered over: it was always readily removed by the exhibition of muriatic acid.

I was called to see a female, aged 70, about five years since, who I was told was brought down on a bed from London to the house of the person who requested me to see her, in a dying state, as he declared. The patient's symptoms were truly horrible. At intervals of but a few minutes she was attacked with severe pains, with a profuse diarrhœa, when she held by the bed-posts, and declared it appeared as if all her viscera were coming from her. It occurred to me directly that these pains might be caused by the presence of a stone in the bladder. I therefore asked if it had ever been supposed she suffered from stone or gravel. She said she had not so suffered for thirty years, nor had ever been asked the question by any medical man, but that previous to forty she used to suffer much from gravel, and occasionally passed several small stones, but at that age she left off passing gravel, and did not believe she had ever had any since. The thought instantly occurred to me that one stone had remained, and had increased in size. She gave me permission to examine her, when a stone was readily detected.

---

* Page 519.

In a few days afterwards I operated by dividing the urethra, but did not cut the bladder. The stone was readily laid hold of, but proved too large for the orifice. I then took a stronger pair of forceps, with narrow blades, and easily broke it into several pieces, which were readily removed. This stone would probably have weighed six drachms, perhaps more, had I been enabled to remove it entire, but as there were many small fragments, and much detritus escaped afterwards with the urine, the weight of the stone must be conjectural.

The recovery of this old woman at the age of 70 was most rapid, and surprising to her friends who brought her down, supposing she could live only a short time. She was alive and well a year since. In this case I firmly believe that the bladder was so closely contracted on the stone that it would not have held an ounce of fluid, while its coats were much thickened and tough, as I ascertained by passing my finger into the bladder. Any attempts at injecting this woman's bladder would have been useless, and lithotrity would probably have been attended with a fatal result.

I am, sir,
Your obedient servant,
G. PEARL.

Windsor, Nov. 8th.

IMPORTANT POINTS IN MEDICINE.

SIR,—The following questions being still *sub judice*, you will oblige me by inserting them in your valuable journal.—I am, sir,

Your obedient servant,
A CONSTANT READER.

London, Nov. 12, 1846.

The experience of the readers of the MEDICAL GAZETTE is requested on the following practical points :—

1. On the treatment of internal inflammations by opium ?
2. To what extent does heart disease occur in chorea, and the nature of the affection ?
3. The propriety of bleeding in apoplexy after 60 *years of age ?*
4. The best treatment of incontinence of urine in children ?
5. The propriety of operating for fistula in ano when the lung is affected to a limited extent with tubercles ?
6. The best treatment of diabetes.

OBJECTIONS TO THE USE OF GUN-COTTON IN FIRE-ARMS—PRODUCTION OF NITROUS ACID IN THE EXPLOSION.

SIR,—At a time when the gun-cotton is attracting so much attention, any thing which adds to our knowledge of it is interesting; and if the following observations have not been already published, they are perhaps also important in relation to its employment in gunnery.

Whilst experimenting upon some of the substance prepared by the mixed nitric and sulphuric acids, I observed a painful effect upon the eyes from the fumes evolved by its explosion, and also a marked odour of nitrous acid. Since then I have found, in every case in which I have made the experiment,—and I have used cotton prepared by myself with great care, and also some furnished by others,—that nitrous acid is evolved during the combustion in sufficient quantities to produce very marked effects. If a little of the cotton is fired upon the hand, the brown or yellow stain characteristic of nitric acid will be formed; and if it is fired upon a marble chimney-piece, the polish will be removed, and the surface found to be roughened. For proving the nature of the acid formed, the following experiment is easy and convenient. Put some of the cotton into the bottom of a deep narrow glass jar, and ignite it by means of a heated platinum wire, or by dropping upon it a spark from partially extinguished wood or paper. The explosion takes place immediately, and the fumes have a slight reddish tinge. Litmus paper is strongly reddened by them, and they have a pungent odour. If one or two drachms of water are poured into the jar, and shaken in it, most of the fumes are dissolved, and a pale yellow solution is obtained, which instantly reddens litmus paper. This may be proved to be owing to nitrous acid by acting upon copper filings, and allowing the gas evolved to pass through a solution of sulphate of iron. In a few minutes the solution acquires the olive-brown colour characteristic of the evolution of nitrous gas.

The explanation of the explosive nature of the cotton, and the products of the combustion, seems to be as follows. The sulphuric acid probably acts merely in withdrawing some portion of the water from the nitric acid, and so concentrating it; for very strong nitric acid is stated to answer without the addition of the sulphuric; and the cotton, as cotton, is not essential, for any loose and porous body containing carbon answers equally well,—for example, flax, &c. The nitric acid then combines with the cotton, which supplies the place of a base, and when dried, the acid is free from water, or any more permanent base. Now this acid cannot exist uncombined, but is instantly resolved into nitrous acid and oxygen. The cotton is a very feeble base, and the affinity between the two is so slight, that a very low degree of heat suffices to separate them. At the moment of separation the acid is decomposed. Nitrous acid flies off, which produces the effects above described, and the cotton burns vividly in the free oxygen evolved, forming carbonic acid, which may also be detected in the products of the combustion, by agitating them with lime water. As there is no fixed body in the cotton, the absence of remaining ashes is accounted for, the whole of the carbon being consumed during the explosion.

Unless some means can be discovered of preventing this evolution of nitrous acid, it is probable that the gradual corrosion of the interior of the nipple and breech of the gun by this agent, will form an obstacle to its general introduction into use as a substitute for gunpowder.—I am, sir,

Your obedient servant,
J. Birkbeck Nevins, M.B. Lond.

Collegiate Institution, Liverpool,
Nov. 11, 1846.

⁂ Dr. Nevins is perfectly correct in his statement respecting the production of nitrous acid in the explosion of gun-cotton. He does not, however, mention whether he first tested for any adhering nitric acid, the cotton which he employed in his experiments. Since his note reached us we have tried two specimens of the cotton which had been thoroughly washed and dried, and which gave no evidence of acidity at the time they were prepared. When a piece was ignited on litmus paper, this was reddened for some space around. When the cotton was floated on a weak infusion of litmus in a jar, and ignited, red acid fumes were produced, and, on agitating the vessel, the infusion of litmus was stongly reddened. When another portion was ignited on paper previously soaked in a solution of starch, dried, and wetted with a solution of iodide of potassium, iodine was set free, and blue iodide of farina produced in the paper around the focus of explosion.

That there was no free nitric acid in the cotton, was proved, first, by boiling a portion in diluted litmus, which was not thereby reddened; and secondly, by boiling another piece in a very diluted solution of sulphate of indigo, which was not bleached. We *think* it more probable that the nitrous acid *is produced* in the experiment by the evolution of deutoxide of nitrogen,—the nitric acid giving up three-fifths of its oxygen instead of one-fifth, as suggested by our correspondent.

The fact here pointed out by Dr. Nevins would of course constitute a very serious objection to the employment of gun-cotton for fire-arms. In reference to this subject, we have heard upon good authority that the British Government have declined employing it as a substitute for gunpowder in the artillery, on the ground that the gun acquires, after a few discharges, so high a temperature as to lead to great risk of explosion on the introduction of a fresh charge! Those who have purchased Professor Schönbein's patent for the liberal sum of £40,000, on what they considered a profitable speculation, may therefore find a deficit instead of a profit. Were there no other objection than that for the first time suggested by our correspondent, Dr. Nevins, it would render the use of gun-cotton, except for mining purposes, in the highest degree improper.

Medical Intelligence.

UNIVERSITY OF LONDON.—M.B. SECOND EXAMINATION, 1846.

The following candidates have recently passed this examination, viz.—

First Division.

Bompas, J. Carpenter, University College.
Day, John Climenson, London Hospital.
Elam, Charles, Leeds School of Medicine.
Goodridge, H. F. A., University College.
Hawksley, Thomas, King's College.
Johnston, J., Queen's College, Birmingham.
Sturt, Thomas James, King's College.

Second Division.

Arlidge, John Thomas, King's College.
Birkett, George, Charing Cross Hospital.
Cowdell, Charles, University College.
Duncan, Peter Martin, King's College.
Eton, Edward W., St. George's Hospital.
Mason, Thomas Peter, Orig. School of Medicine, Peter Street, Dublin.

EMPLOYMENT OF BISMUTH IN DIARRHŒA.

M. Rayer speaks in praise of the trisnitrate of bismuth when used in the diarrhœa to which phthisical patients are so liable, and in that which occurs during the progress of typhus. This remedy has for many years been employed, and often with great advantage, in the simple form of diarrhœa which affects young children.—*Gaz. des Hôpitaux*, Sept. 8, 1846.

MODIFIED SMALL-POX (VARIOLOID DISEASE)—REVACCINATION.

A GIRL, æt. 19, came under the care of Dr. Sicherer, in the Hospital at Heilbrunn, labouring under a severe attack of varioloid disease. She was accompanied by her sister, æt. 17. Although they slept together, and were in constant intercourse, the latter was not attacked with the disease. Both sisters presented well-marked cicatrices, which indicated that they had been properly vaccinated. The younger one was successfully revaccinated during the period that she was in the hospital. It is difficult to explain why this girl, who for two days shared the same bed, and for five weeks the same room with her sister, while labouring under varioloid disease, was not attacked with it, while, on revaccination, good and perfect vesicles were produced.—*Gaz. Méd.*

⁂ This case is well calculated to show the erroneous inferences which may be drawn respecting revaccination. Had the younger girl been revaccinated before she entered the hospital, her preservation would have been ascribed to the revaccination, especially as the vaccine matter produced its usual normal effects. The case further proves the correctness of one of the conclusions of the French Commission, that while the vaccine disease offers no protection against itself, and therefore leaves the supposed necessity for revaccination very questionable, it has the power of protecting the person against varioloid disease.

ON THE SMALL-POX AND VACCINATION.

DR. ROESCH has published the following conclusions as the results of his extensive researches on these subjects:—

1. Vaccinia is nothing more than the variola of the human species, transmitted to the cow by contact.
2. Persons who have been well vaccinated may in some rare instances take small-pox in a severe and dangerous form.
3. Attacks of small-pox in vaccinated individuals are generally of a mild and modified character; and the more recent the vaccination, the more marked is this result.
4. Small-pox rarely attacks persons after the age of 30 years, but the disease is then sometimes severe.
5. The greater number of persons who have undergone vaccination are protected from small-pox for life, even when they have been exposed to contagion.
6. Varioloid disease is only a modification of small-pox. This is proved by the symptoms, and by the appearance of the disease as a consequence of inoculation, or after exposure to contagion.
7. Varicella is a peculiar eruptive febrile disease. It *has nothing in common except the name with true or modified small-pox.*
8. Variola and varioloid disease never arise spontaneously, but only after exposure to contagion.
9. Vaccination is the only means which we possess of exterminating small-pox.—*Gaz. Medicale*, Oct. 31.

QUANTITY OF SULPHUR IN ANIMAL BODIES.

ACCORDING to M. Dumas, all azotised substances, whether of plants or animals, contain 1-100th part of their weight of sulphur. Thus in about 26 pounds, (Apoth. wt.) of dry azotised matter, the quantity in a man of ordinary size, there are rather less than 3¼ ounces of sulphur. The population of France, therefore, represents a quantity of sulphur equal to two millions of kilogrammes (5,360,000 pounds Apoth. wt. !); and we may estimate the total quantity of sulphur in the animal creation of France at twenty millions of kilogrammes!

We suspect that, in this calculation, M. Dumas is treating the French population as if it consisted wholly of adults. There is no doubt that a large quantity of sulphur is contained in animal substances, but its exact proportion has not yet been accurately determined; and it probably varies considerably in different individuals. Some are so overcharged with sulphur, that the cutaneous perspiration has distinctly the odour of sulphuretted hydrogen; and silver coins in the pockets of such individuals, or ornaments on the dresses, soon acquire a black incrustation of sulphuret of silver. Several instances of this have come to our knowledge.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, *Nov.* 13th.—J. M'Keand.—J. Bassett.—W. Hatton.—T. E. P. Martin.—W. W. Watter.—R. Smith.—R. Jackson.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

THURSDAY, *Nov.* 12th.—Thomas Tyrwhitt Whitchurch Beunett, London.—George Fort Fox, Temple Coombe, Somerset.—Jas. Johnston Brown, London.—Edwin Cotton Cottingham, Kent.—Robert Thomas Lodge, Liverpool.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer .... 30·
„ „ Thermometer[a] .... 49·1
Self-registering do.[b] ...... max. 76·7 min. 33·
„ in the Thames water „ 0· „ 46·5

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, ·03: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 6·2° above the mean of the month (42·9°). The extreme hebdomadal range in th self-registering thermometer was 43·7°.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Oct. 31.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	689	Males....	463	Males....	493
Females .	692	Females .	481	Females .	475
	1381		944		968

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	944	1000	968
SPECIFIED CAUSES	939	992	961
1. *Zymotic*(or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	167		
2. Dropsy, Cancer, &c. of uncertain seat	103	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	138	151	157
4. Lungs, and other Organs of Respiration	303	313	294
5. Heart and Blood-vessels	38	29	27
6. Stomach, Liver, and other Organs of Digestion	74	70	72
7. Diseases of the Kidneys, &c...	9	8	7
Childbirth, Diseases of the Uterus, &c.	19	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	13	6	6
10. Skin, Cellular Tissue, &c.	5	2	2
11. Old Age	39	66	67
12. Violence, Privation, Cold, and Intemperance	31	27	26

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	2	Convulsions	35
Measles	8		
Scarlatina	27	Bronchitis	46
Hooping-cough..	29	Pneumonia......	72
Diarrhœa........	19	Phthisis	138
Typhus	47	Dis. of Lungs, &c.	15
		Teething	8
Dropsy..........	10	Dis. Stomach, &c.	6
Sudden deaths ..	5	Dis. of Liver, &c.	18
Hydrocephalus ..	23	Childbirth	14
Apoplexy........	26	Dis. of Uterus, &c.	5
Paralysis	17		

REMARKS.—The total number of deaths was 56 below the autumnal and 24 below the annual average. The deaths from Diarrhœa have fallen to about the averages. There was not a single death from Cholera. Typhus fever is still very fatal. In the North and South districts, the mortality was above the average. In the others, it was below.

NOTICES TO CORRESPONDENTS.

"Selby."—We do not know that there is any established rule on the subject, but we think it would only be an act of courtesy for a new practitioner to call at least upon those who are residing in his immediate vicinity.

We regret that we are again compelled to postpone several communications of great professional interest, which are in type.

Dr. Copland's communication on Pestilential Cholera, and the letters of Mr. S. Tibbs and Mr. H. Smith, will be inserted in the following number.

We should feel obliged to those friends who so frequently forward to us newspapers, if they would at the same time point out, in a letter, the article to which they wish to call our attention.

Dr. Camps's paper has been received.

We have been compelled by want of space to divide Mr. Harvey's communication on Fracture of the Cranium. The remainder shall appear next week.

ROYAL COLLEGE of SURGEONS of ENGLAND.—Notice is hereby given that EXAMINATIONS for the FELLOWSHIP will take place at this College on Tuesday the 1st and Thursday the 3d of December next.

The Bye-Laws and Ordinances relating to the Fellowship, with other particulars, may be obtained on application to the Secretary.

The requisite Certificates and Testimonials must be forwarded to the College at least ten days before the period appointed for the Examination.—By order,

EDWARD BELFOUR, Sec.

November 6th, 1846.

THE NEW EDITION of DR. ASHWELL on the DISEASES of WOMEN will be ready next week.

S. Highley, 32 Fleet Street.

NEW WORK BY DR. E. J. SEYMOUR.

In the press, in 2 volumes, 8vo.

THOUGHTS on the NATURE and TREATMENT of several SEVERE DISEASES of the HUMAN BODY; including—1. Diseases of the Stomach; 2. Gout; 3. Melancholy (Mental Derangement); 4. Epilepsy; 5. Neuralgic Affections - Brow Ague, Sciatica, &c. By EDWARD J. SEYMOUR, M.D. F.R.S. late Senior Physician to St. George's Hospital.

Longman, Brown Green, and Longmans.

Just published, fcp. 8vo. 12s. 6d. cloth,

A MANUAL of CHEMISTRY; with numerous Illustrations on Wood. By G. FOWNES, Ph.D. F.R.S. Professor of Practical Chemistry in London University College.

"An admirable exposition of the present state of chemical science, simply and clearly written, and displaying a thorough practical knowledge of its details, as well as a profound acquaintance with its principles. The illustrations and the whole getting of the book merit our highest praise."

BRITISH AND FOR. MEDICAL REVIEW.

London: John Churchill, Princes Street, Soho.

This day is published, price 3

LIEBIG's QUESTION to MULDER tested by Morality and Science. By Dr. J. G. MULDER, Professor of Chemistry in the University of Utrecht. Translated by Dr. P. F. H. FROMBERG. With an Introduction, by JAMES F. W. JOHNSTON, M.A. F.R.SS. L. & E. F.G.S.

William Blackwood and Sons, 45, George Street, Edinburgh, and 37, Paternoster Row, London.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."

PHARM. JOURNAL, May 1846.

Prepared by Dinneford and Barland, 172, Bond Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

SALISBURY INFIRMARY.—Wanted a HOUSE-SURGEON. No married person need apply, nor any person who has not passed an Examination before the College of Surgeons, and at Apothecaries' Hall.

*** His Examination and Character must be certified by sufficient testimonials. His Salary is £50 per annum, with washing, lodging and boarding in the house, to which a gratuity will be added at the end of the year if the office be discharged to the satisfaction of the Governors.

The Rules and Statutes to be observed by the House-Surgeon and Apothecary, may be known on application to the Secretary, by letter, post paid.

The election will take place at the Infirmary, on Thursday, the 26th day of November next, at 12 o'clock at noon.

By order of the Special Court,

Oct. 3, 1846. W. D. Whitmarsh, Sec.

In 8vo. cloth, price 6s.

A PRACTICAL TREATISE on INFLAMMATION, ULCERATION, and INDURATION of the NECK of the UTERUS; with Remarks on Leucorrhœa and Prolapsus Uteri as symptoms of this form of Disease. By J. Henry Bennet, M.D., Physician-Accoucheur to the Western Dispensary, formerly House-Physician to the Hospitals St.-Louis, La Pitié, and La Salpêtrière, Paris, &c.

"Dr. Henry Bennet's work has, we think, very ably supplied a deficiency in this part of medicine ...... We do not hesitate to say that Dr. Henry Bennet has treated these subjects more clearly and faithfully than any author we are acquainted with, and we have read his treatise with much real satisfaction."

Medico-Chirurgical Review.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. 15s. cloth,

DR. UNDERWOOD'S TREATISE on the DISEASES of CHILDREN: with Directions for the Management of Infants. The Tenth Edition, revised, with the addition of much new matter. By Henry Davies, M.D. Fellow of the Royal College of Physicians, and Senior Physician to the British Lying-in Hospital.

London: John Churchill; Longman and Co.; Simpkin and Co; S. Highley; and T. Hill. Dublin: Hodges and Smith.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL or ASYLUM. Weekly Board, November 9th, 1846.—WANTED, in consequence of the resignation of Mr. P. A. Jackson, a CLERK to the Physicians. Each candidate must be unmarried, and a Licentiate of the Society of Apothecaries. The gentleman who may be elected will be required to remain in the situation for a term of not less than two years; to reside in the house, and devote the whole of his time to the duties of the office; which duties consist in visiting and prescribing for the home and out patients, under the superintendence of the physicians. Salary 40 guineas per annum, with board and lodging. Letters from candidates, with testimonials, must be sent (free of charge) on or before Saturday the 28th instant to the Secretary, at the Infirmary.—By order of the Weekly Board,

Joshua Radford, Sec.

MR. CHURCHILL'S SERIES OF MANUALS.

Fcp. 8vo. cloth, 12s. 6d. each volume,

Aggregate Sale, 27,750 Copies.

1.

MATERIA MEDICA and THERAPEUTICS. By Dr. Royle, F.R.S.

2.

PHYSIOLOGY. By Dr. Carpenter, F.R.S.

3.

CHEMISTRY. By Dr. Fownes, F.R.S.

4.

SURGERY. By Mr. Fergusson, F.R.S.E.

5.

MEDICAL JURISPRUDENCE. By Mr. Taylor, F.R.S.

6.

NATURAL PHILOSOBHY. By Dr. Golding Bird, F.R.S.

7.

ANATOMY. By Mr. Erasmus Wilson, F.R.S.

"We here give Mr. Churchill public thanks for the positive benefit conferred on the Medical Profession by the series of beautiful and cheap Manuals which bear his imprint."

Brit. and For. Medical Review.

London: John Churchill, Princes Street, Soho.

Next week, 2d Edition, with considerable additions, 8vo. 12s. cloth; or with Eight Engravings on Steel, accurately coloured, 28s.

DISEASES of the SKIN. By Erasmus Wilson, F.R.S.

London: John Churchill, Princes Street, Soho.

Just published, post 8vo. 7s. cloth,

PRACTICAL REMARKS on NEAR SIGHT, AGED SIGHT, and IMPAIRED VISION. By W. White Cooper, F.R.C.S. Senior Surgeon to the North London Ophthalmic Institution.

London: John Churchill, Princes Street, Soho.

Just published, 12mo. 4s. cloth, Dedicated to Sir James M'Grigor, Bart. M.D. F.R.S.

HYDROPATHY; with an Account of the principal Cold Water Establishments of Germany. By J. Stevenson Bushnan, M.D. Fellow of the Royal College of Physicians of Edinburgh.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. with Woodcuts, mounted on cloth, price 5s. boards,

A TABULAR VIEW of the PHYSICAL SIGNS and DIAGNOSIS o the DISEASES of the LUNGS. With a Synopsis of the Signs which occur in each Disease. By James Turnbull, M.D. Physician to the Liverpool Northern Hospital.

London: John Churchill, Princes Street, Soho.

REFORM YOUR TAILORS' BILLS.

DOUDNEY AND SON, 49, LOMBARD STREET.

ESTABLISHED 1784.

THE
DUBLIN QUARTERLY JOURNA
OF
Medical Science.

No. IV. FOR NOVEMBER, 1846, CONTAINS:—

Original Communications.

1. On Chlorosis and Hæmorrhage. By Sir Henry Marsh, Bart., reported by Dr.
2. On Excision of the Cervix Uteri for Carcinomatous Diseases. By J. Y. Simpson, Edinburgh. With Illustrations.
3. On the Cure of Popliteal Aneurism by Compression. By J. M. O'Ferrall, With Illustrations.
4. On the Efficacy of Electricity, Galvanism, Electro-Magnetism, and Ma Electricity, in the Cure of Disease. By M. Donovan, Esq.

Reviews and Bibliographic Notices.

Brodie's, Liston's, Chelius's, Ferguson's, and Miller's Surgery.—Parkes on the Dys and Hepatitis of India.—Patterson's Zoology.—Makellar on Black Phthi Leeson's Exposition of Liebig's Physiology.—Griffith on the Blood and H Secretions.—Rees on the Blood and Urine in Health and Disease.

Retrospects, Reports, and Scientific Intelligence.

Proceedings of the Pathological Society of Dublin.—*Medical Miscellany*—Consisti Cases by Drs. Hamilton, Ellsworth, Humfrey, Marshall, Aston Purdon, O'Flaherty, Purefoy, Cusack, and Wilde.—*Obituary*—Biogra Memoir of Dr. Bartholomew Mosse, founder of the Dublin Lying-in Hospital *a Portrait*). Index to Vol. II.

OPINIONS OF THE PRESS.

"The Dublin Medical Journal, which has long ranked as one of the most able representati Medical Science in Ireland, has recently been transformed into a Quarterly Periodical, und editorship, we understand, of Mr. Wilde. . . . . We have no doubt that the Dublin Quarterl prosper, and increase the high character which it bears in periodical medical literature. Th number, which we have now before us, promises well for the future. . . . . We wish our temporary every possible success. We have the highest opinion of the Irish Medical Sch school remarkable for its sound clinical character, and its freedom from speculative fancie wish well to its representatives in the Medical Press."—Lancet, February 14th, 1846.

"We have been led to the exult in the memorials of literary and scientific greatness beque to us by the illustrious Irishmen of former days; a periodical, such as that before us, tells th spirit which animated them still exists; and we should be unjust to the eminent men of the pr age did we not acknowledge, that at no period in the annals of this, or any other nation. h steady and increasing light of medical science shone with brighter lustre. It is for the you appreciate the responsibility, as well as privilege, of sustaining and spreading an illuminati honourable to their country."—Dublin Hospital Gazette, April 1st, 1846.

"Distinguished as it has heretofore been for ability, and the avoidance of anything offens good taste, the character of those by whom it is hereafter to be conducted, no less than the evid furnished in the number before us, afford a sure guarantee that it will maintain its position an the ablest and most valuable medical periodicals of the day."—Philadelphia Med Examiner, June, 1846.

"This Journal, which has flourished from the year 1832 until the present time, during period twenty-eight volumes have been published, has now assumed a new and enlarged form. pages are devoted to medical and surgical science in all its branches, including Chemistry, Ma Medica, and Botany; 'unconnected with medical politics, and uninfluenced by party feeling, jeal or personal hostility.' . . . . . It is satisfactory to observe the increasing disposition prevails, both in England and in Ireland, to encourage and support undertakings of description."—Pharmaceutical Journal, March 1st, 1846.

Hodges and Smith, 104, Grafton Street, Dublin. Longman and Co.; Sim Marshall, & Co.; and W. S. Orr, London. Sutherland and Knox, Edinburgh. Glas D. Chambers.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish
Sepulchre, in the City of London, by Eliezer Chater Wilson, 57, Skinner Street afor
Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said
by William Longman, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Nov. 20, 1846.

N° 991.—Vol. XXXVIII.
[New Series, No. 83.]

Price { Unstamped, 8d.
Stamped.... 9d.

LONDON MEDICAL GAZETTE, OR Journal of Practical Medicine.

Published every Friday Morning.

November 27, 1846.

Also in Monthly Parts.

LECTURES.

Page
A Clinical Lecture on Scrofula, delivered at the York Medical School, by Thomas Laycock, M.D. Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine 911

ORIGINAL COMMUNICATIONS.

Case of Malignant Fungoid Disease of the Tongue. By Robert Ceely, Esq. of Aylesbury. Communicated by William Lawrence, Esq. F.R.S. Surgeon to St. Bartholomew's Hospital 919
Observations on Two Forms of Dysmenorrhœa. By Henry Oldham, Esq. Physician-Accoucheur and Lecturer on Midwifery at Guy's Hospital 923
Observations on the Diseases of Children. By James Milman Coley, M.D. Licentiate of the Royal College of Physicians, and Physician to the Western Dispensary .. 928
Secondary Epilepsy and Apoplexy 928
A Case of Fracture of the Cranium, with Depression and consequent Hernia Cerebri. By George Harvey, Esq. 931

LEADING ARTICLES.

mportant Decision respecting Medical Certificates of Insanity.................... 935
anitary Legislation 939
nformations under the Contagious Diseases Prevention Act........................ 939

REVIEWS.

Manual of Operative Surgery, based on Normal and Pathological Anatomy. By J. F. Malgaigne, Professor Agrégé de la Faculté de Médecine de Paris. Translated from the French by Frederick Brittain, A.B. M.D. M.R.C.S.L.......... 940
Urinary Deposits: their Diagnosis, Pathology, and Therapeutical Indications. By Golding Bird, A.M. M.D. &c. 2d edit.. 942
Handbook of Human Anatomy, General, Special, and Topographical. Translated from the original German of Dr. Alfred von Behr, by John Birkett, F.R.C.S.E. Demonstrator of Anatomy at Guy's Hospital 942
Manual of Materia Medica and Therapeutics. By J. F. Royle, M.D. F.R.S. Professor of Materia Medica and Therapeutics in King's College.................. 943

PROCEEDINGS OF SOCIETIES.

Page
Westminster Medical Society.—Mr. Marshall on a Case of Sudden Death 946
Dr. F. Bird on the Diagnosis and Pathology of Ovarian Tumors................ 947
Medical Society of London.—Discussion on Dr. Hughes's Case of Disease of the Chest 949
Pathological Society of London.—Rupture of the Uterus.......................... 950
Very rare Case of Uterine Disease........ 950
Aneurism of the Aorta bursting into the Œsophagus 953
Fibrous Tumor of the Lower Jaw 954
Microscopic Preparations of the Kidney .. 954
Microscopical and Chemical Examination of a Kidney affected with Morbus Brightii 954
Congenital Malformation of Pelvis 955
Extensive Extravasation of Blood in the Brain 955

CORRESPONDENCE.

Death following the Removal of a Bursal Tumor from the Patella. By Henry Smith, Esq. M.R.C.S. late House-Surgeon to King's College Hospital 955
On the Contagious Propagation of Cholera. By John Thomson, M.D. of Edinburgh. Communicated by James Copland, M.D. F.R.S. 956
Chlorate of Potash as a Remedy for profuse Salivation induced by Mercury. By John Allison, Esq. of Bridlington 957

MEDICAL INTELLIGENCE.

Medical Legislation........................ 919
Anhydrous Alcohol......................... 946
Progress of the Asiatic Cholera in the East.. 958
Diarrhœa Infantum......................... 958
Degree of Doctor of the University of Madrid conferred on Professor Orfila 958
Tincture of Logwood as a Test for Bicarbonate of Lime in Spring Water.......... 958

MEDICAL STATISTICS.

Mortality in the Army and Navy 935

SELECTIONS FROM JOURNALS, ETC.

An Ancient Relic on the Suppression of Quackery 923
Caution to Druggists—the Duties of the Ancient Poticarye 937

WEEKLY TABLES, ETC.

[For Advertisements, see next page.

NEW WORKS printed for LONGMAN AND CO.

I.

PARABLES of OUR LORD. Illuminated in Colours, a
Black and Gold. With a Design from one of the early German Engravers. Square fcp. 8
in a massive carved binding; morocco, 30s. (*bound by Hayday.*)

II.

The SERMON on the MOUNT. Illuminated in Gold
Colours by Owen Jones, Architect. New Edition. Square fcp. 8vo. in a brocaded sil
21s.; morocco, 25s. (*bound by Hayday*).

III.

The MINSTRELSY of the ENGLISH BORDER; be
Collection of Ballads, Ancient, Remodelled, and Original, founded on well-known Border I
By Frederick Sheldon. Square post 8vo. 15s.; morocco, 30s. (*bound by Hayday*).

IV.

The LEONORA of BÜRGER. Translated by Julia M. Cam
With Six large Illustrations, drawn on Wood by D. Maclise, R.A. Engraved by John Tho
Crown 4to. [*Early in Decem*

V.

BALLADS and other POEMS. By Mary Hov
Square crown 8vo. with a Portrait from a Picture by Miss Gillies, beautifully engraved by
Egleton. [*Early in Decem*

VI.

CORRESPONDENCE of JOHN, 4th DUKE of BEDFO
selected from the Originals at Woburn Abbey (1742 to 1770). With Introductions by
John Russell. 3 vols. 8vo. with Portrait, 48s.

Vol. 1 (1742 to 1748), 18s.;—Vol. 2 (1749 to 1760), 15s.;—Vol. 3 (1761 to 1770).

VII.

A LITERAL TRANSLATION of the BOOK of PSAL
To which are added, Dissertations on the Word "Selah," and on the Authorship, Order,
and Poetical Features of the Psalms. By the Rev. John Jebb, A.M. 2 vols. 8vo. 21s.

VIII.

The DOCTOR, &c. Vol. VI. From the Papers of the
Robert Southey. Edited by his Son-in-law, the Rev. John Wood Warter. Post 8vo.
[*Early in Decemb*

IX.

A BOOK of ROXBURGHE BALLADS. Edited by J
Payne Collier, Esq. Fcp. 4to. with Woodcuts, 21s.; morocco, 38s. (*bound by Hayday*).
[*In a few d*

X.

The CHRISTMAS HOLYDAYS in ROME. By the Rev.
Kip, A.M. Edited by the Rev. W. Sewell, B.D. Fellow of Exeter College, Oxford. Fcp.
[*Just rea*

XI.

MARGARET PERCIVAL: a Tale. By the Author of "A
Herbert," &c. Edited by the Rev. W. Sewell, B.D. Fellow of Exeter College, Oxford.
fcp. 8vo. [*Nearly rea*

XII.

The NEW SPEAKER and HOLIDAY TASK-BOOK. Sele
from Classical Greek, Latin, and English Writers. By the Rev. W. Sewell, B.D. Fellow
Tutor of Exeter College, Oxford. 12mo. 6s.

XIII.

The SCIENTIFIC PHENOMENA of DOMESTIC LI
familiarly explained. By C. Foote Gower, Esq. 2d Edition. Fcp. 8vo. with Woodcu

XIV.

The POTATO PLANT: its Uses and Properties; together w
the Cause of the present Malady, the Extension of that Disease to other Plants, the Questi
Famine arising therefrom, and the best Means of Averting that Calamity. By Alfred S
F.R.S. 8vo. with 10 Plates, 10s. 6d.

LONDON: LONGMAN, BRO

London Medical Gazette.

Lectures.

A CLINICAL LECTURE ON

SCROFULA,

Delivered at the York Medical School,

By Thomas Laycock, M.D.
Physician to the York Dispensary, and Lecturer on the Theory and Practice of Medicine.

Ætiology and pathology—identity of scrofulous and tubercular diseases—infantile marasmus—precocity of intellect—scrofulous meningitis—chronic peritonitis, with bulimia—ophthalmia—glandular abscesses and ulcers—Is scrofula a medical or surgical disease?—phthisis pubumalis—glandular abscesses prophylactic in phthisis, and when?—hygiene of scrofula—York Health of Towns' Associations—duty of supporting hygienic associations.

I have already, in the ordinary course of my lectures, stated to you my views as to the general pathology and therapeutics of scrofula. Scrofulous diseases are, however, so varied, and so extensively prevalent, that I think a discourse—a discursive lecture, on some of the cases we have already treated at the Dispensary, may be useful in fixing the views already communicated to you, and in communicating practical information on points in medical life and practice which could not be well introduced into the scholastic course.

You will remember that I distinguished between the scrofulous diathesis and the scrofulous cachexy. The one is the constitutional predisposition to scrofula, arising, as we argued, out of the lymphatic temperament; the other is the disease itself in possession of the system generally. It is the scrofulous morbid state,—the *cachexia*, or bad habit of body. But the lymphatic temperament may not always give rise to the scrofulous diathesis; it may arise out of the bilious or the sanguine: oftener out of the latter, I think, than the former. And the reason for this we considered to be in the theory that scrofula, or the proximate cause of scrofula, was a perversion of the nutrient fluids and functions. The blood-corpuscles are fewer in number; the albumen and fats of the serum are increased in quantity. With the diminished number of corpuscles there is a diminished supply of oxygen to the tissues, for they are (we concluded) the oxygen carriers; and, with this diminished supply of oxygen to the tissues, there is an imperfect conversion of the nutrient materials, and a less evolution of heat. Consequently, we inferred that as this morbid state of the blood and tissues might take place from impure air or innutritious diet in any temperament, so scrofula could not be peculiar to any temperament, and therefore it was a mistake to think that fair persons only were liable to the disease. Still, the greater proportion of persons exhibiting the scrofulous cachexy in York are of the fair-haired race: and this we explained, partly by the fact that the greater proportion of the population in York and in the North of England is of the fair-haired race; they belong to the Teutonic stem. If, however, you investigate this question in Wales, in the South of Ireland, or in the South of France, you will probably have just the contrary results, because in these localities the Celtic or dark-haired race is predominant. Even in some districts of England there is a less proportion of fair-haired persons suffering from scrofula. Mr. B. Phillips states that he has examined 9000 scrofulous children, and only 32 per cent., or less than one-third, were fair-haired. It is rare to see distortion of the features in scrofulous dark-haired persons; it is not often they have the thick tumid upper lip and swollen alæ nasi so characteristic of the scrofulous cachexy. On the contrary, they are often fascinatingly beautiful. Now, the scrofulous cachexy is that state of the system in which you have general bad health, with a deposit of a certain morbid product, already described to you under the term tubercle or tuberculous matter. I told you to consider this and the deposit in scrofulous glands as identical. I said that the tubercular diathesis and the scrofulous diathesis were one and the same, but that when the deposit took place in the lungs or on the serous membranes, whether of the encephalic, thoracic, or abdominal cavities, you might call it tubercular, and if in the mucous membranes, or in the glands, or bursæ mucosæ, it would be right to call it scrofulous. These are practically the only distinctions between scrofulous and tubercular deposit. You have *tubercles* of the lungs—of the heart—of the brain; *scrofulous* deposits in the liver, the kidneys, the uterus, the mesenteric glands, the joints, the subcutaneous glands. Very trustworthy authorities have maintained that the two are essentially different, but I prefer to adopt the opposite side of the question. I think it both the more practical and the more correct. A person may during childhood escape death from tabes mesenterica, or *wasting* from scrofulous deposit in the mesenteric glands, to die of tabes pulmonalis, or wasting from deposit in the pulmonary cells; but his escape from the one does not prove that the other is different: it only proves that the circumstances of

991.—xxxviii. Nov. 27, 1846.

childhood were more favourable to his general health and to prophylaxis, to the *prevention* of scrofulous deposit, than the circumstances of puberty or of adult age.

We have had numerous illustrations of scrofula and its pathology in our dispensary practice. You will remember that I pointed out to your special notice a child brought by its mother suffering from marasmus; I believe some pathologists would term the disease strumous dyspepsia. Although five months old it seemed no bigger than a fœtus of seven months; the mother held it in her arms just as a child holds a doll. She said that it was feverish, and that its motions were very bad; that its food passed through it unchanged; that sometimes it sucked voraciously, and sometimes scarcely at all; and that no food that ever it got seemed to do it any good. On looking at the child we saw that its face was withered up, and wrinkled, like that of a very old man; that it was literally skin and bone, and apparently without strength to cry. This is the first form of scrofula we meet with. There is deposit in the mesenteric glands probably, but not in the Peyerian glands; dentition has not commenced, and there is not the general irritation of the mucous tissues which in greater or less degree accompanies that process, and determines the locality of the deposit.

The next form we had to notice was tabes mesenterica; we have had several examples of this. One was presented to us by its mother, a little ricketty woman with a humpback. The mother was scrofulous; the child had constant diarrhœa, tumid tender abdomen, fever, wasting; it was scrofulous too. You might notice her quick perception of what was passing through my mind, when I made some slight allusion to the condition of her spine; she immediately assured me that she was very strong, and always had been; and it was evident that she earnestly wished to impress me with the idea that there was no hereditary transmission of disease to the child. Now there is nothing people dislike so much as to be thought to have "scrofula" in the family, or to be afflicted with "the evil," or the "King's evil." Many persons would be highly offended if you were to tell them the truth in those vulgar phrases. It is always well to avoid hurting people's feelings unnecessarily, both for your own interests and as a point in good manners. Euphuistic phrases (a sort of "soft sawder"), are always allowable in matters in which the modesty or other feelings of your patients would be offended. You can therefore call the scrofulous diathesis or cachexy, a "constitutional debility," or "a delicate state of health." I believe that some practitioners object to giving the cause of death to the public registrar in some instances of death from scrofula; they think family secrets of this kind should not be revealed by them, and I think there is some validity in the objection. In several forms of fatal scrofulous disease it is quite unnecessary, however, to use the obnoxious term scrofula; as, for example, in death from lumbar abscess, or from abscess and caries of the vertebræ, or tabes mesenterica or tubercular phthisis.

Of course the reason for this dislike to be thought scrofulous is, the popular opinion that the diathesis is hereditary. Some writers whose opinions should be received with respect doubt the hereditary transmission of scrofula, or of the scrofulous diathesis. I do not join in their doubts myself; I would recommend you to consider all diatheses and cachexies as being hereditary. You will often get a better insight into a patient's case by knowing the diatheses or diseases of his parents, or near relatives. Sometimes he resembles a grandparent, sometimes "he is the picture" (to use a common phrase) of his uncle or aunt. Hereditariness may be dormant in a generation, or even in two; there is the predisposition latent, but the exciting causes are never applied that rouse it into action. The spark is never applied to the morbid train, and no overt disease is developed. But the *semina malorum* are there. Comparative physiology will throw much light on hereditariness. A volume lately *published* by the Ray Society entitled "The Alternation of Generations," (it is by a continental zoologist named Steenstrup), throws some curious light on this subject. You have one generation totally *unlike* the parent, giving birth to another generation that exactly resembles the parent. This is in trematode animals, the fluke family,—and it seems probable that other entozoa are subject to this alternation of generations. And certainly something similar takes place in the hereditary transmission of mental or corporeal characteristics in man.

The child of the poor ricketty woman died. She came to the dispensary for the medical certificate of the cause of death, her eyes overflowing with tears, and her heart apparently with gratitude for our attention. Tenderness, amiability, a certain amount of intellectuality, generally characterise scrofulous people. The *corporeal* development is stunted; the teeth often appear late; indeed, it is the ordinary rule with a scrofulous child, to gain the age of twelve or fourteen months before the first incisors appear. You should therefore examine the mouth of a child when you suspect scrofulous disease. But although the body is stunted the mind is precocious; and this precocity arises from a quasi morbid state of the brain. If a scrofulous child escape tabes mesenterica, it is in danger of scrofulous deposit in the serous membranes of the brain; and if this take place a slight cause will excite inflammation of those membranes, and you have "water on the brain," as it is termed, or acute hydrencephalus."

Sometimes peritonitis follows on the deposit of tubercles in the mesentery, and then you have water in the belly, or ascites. We have such a case under treatment in the person of a boy, aged 2 or 3 years, I think. He has the distinct scrofulous facies; has had persistent diarrhœa, feverishness, hungriness, wasting, and other signs of mesenteric disease; and now there is a tumid abdomen and manifest fluctuation. The bulimia in tabes mesenterica is always a remarkable symptom; the instinct of alimentiveness is excited, and the patient, with *both* its little skinny hands full of food, will be fiercely angry if it observes another to eat from its dish, or even to eat at all; and you generally observe a peculiar expression about the mouth corresponding to this fierce instinct; curved lines passing from the alæ nasi to the corners of the mouth, and a knitting of the brows, all which traits are highly characteristic of tabes mesenterica. This patient first had minute doses of calomel; he then took, and is now taking, the iodide of potassium, and he has further friction on the abdomen two or three times daily with an ointment of iodide of lead. He is doing well under the treatment.

There are two brothers, aged 7 and 9 years. The nine-year old is the less of the two, and he stood blinking before us, having scrofulous ophthalmia, with his face distorted by a large cluster of scrofulous cervical glands on the left side. The other boy has also enlarged glands, but no ophthalmia, and nothing else except small superficial abscesses on the scalp. The nine-year old has done well with sulphate of quinine: this, combined with alterative doses of calomel, is by far the surest remedy in scrofulous ophthalmia. The other has improved much while taking the iodide of potassium. They both have bright red hair, and as a young female who came with them had similar hair, a striking scrofulous facies, and a family likeness altogether, I was induced to inquire if she were sister to the boys; but she was not, only cousin, and yet she was clearly of the blood, perhaps more strikingly so than their own sister is. This illustrates the alternation of generation, or rather the collateral transmission of hereditary family traits.

Enlarged and truly scrofulous cervical glands are very commonly seen in children from the *age of three years* and upwards. *During dentition the cervical glands of children younger than three years will* enlarge, but they quickly subside, and rarely leave those large bosselated masses which you so frequently see under the ears and jaws of lads from three to ten or twelve years of age. I believe you will find the iodide of potassium a good remedy in these cases, sometimes combined with a chalybeate, and with inunction with iodide of lead ointment, in the early stage. It certainly allays the pain and inflammatory condition of the glands. Of course, when the scrofulous matter is largely deposited in the glands, it must be looked upon as a foreign body, and the gland must suppurate before it can be got rid of. When they have suppurated the skin is often left in a flabby unhealthy state, and there is a thin ichorous discharge. Under these circumstances you will do good by pencilling the skin with nitrate of silver two or three times a week. I do not think I shall be accused of trenching too much upon the domain of the surgeon in mentioning these particulars. The fact is, that there is no *definable* line between medicine proper and surgery proper, and when you hear an individual making a great noise about some imaginary trespass on his domain of physic or of surgery, you may conclude that the gentleman is a little behind the age, or that there is a sad film before his mental vision, which prevents his perception of the undoubted truth that the domains of medicine proper and surgery proper can never be defined.

I believe these enlarged cervical glands have been the handle by which surgeons have dragged scrofulous diseases into their department. These morbid glands have long been considered to characterise the disease termed scrofula; but a spirit of enlarged pathological research has amply demonstrated that cancerous and scrofulous, and other so-called surgical diseases, are but the outward manifestations of an internal disease: so surgeons are turning physicians, and physicians turning philosophic surgeons (witness Dr. Walshe's Work on Cancer), and these old absurd attempts at defining the two departments of practice are made to appear more absurd than ever.

We have two or three cases of scrofula in adults. One is a fat girl of eighteen,—really fat, with fair flaxen hair, large mammæ, a most decrepid set of teeth, thick cracked lips, swollen legs, chlorotic circulation, amenorrhœa. She is an exquisite example of one form of scrofulous diathesis. Tubercles will probably be soon formed in the lungs (if they are not there already), and when they begin to soften, and suppuration takes place, developing the phenomena of tubercular phthisis, all the fat so thickly laid on her person will rapidly melt away, like snow in spring, and she will probably go off in a "gallopping consumption."

There is another example of scrofula, which is just of an opposite character. It is also in a female, about 28 years old, of a very bright *slate* complexion. I can compare it with no other tint, unless it be light muddy grey. She is thin, meagre, and has enlarged glands in the axillæ and neck; and it is well for her that they are there, for I am inclined to think they will be her defence against the tubercular deposit in the lungs; at all events they will much delay the fatal termination. I have witnessed three or four cases of tubercular phthisis of this kind—with the peculiar complexion, the enlarged scrofulous glands in the neck and axillæ, and tubercular deposit in the lungs going on, but very slowly indeed, the patient lingering on from day to day in really a wonderful manner. I see that Dr. Glover, of Newcastle, in his recently published work on Scrofula, (a work containing the results of original investigations), states it to be a popular belief that scrofulous cervical glands prevent the internal disease becoming manifest; and he quotes an observation by Sydenham somewhat like that I have just made. I certainly cannot say I have seen phthisical persons *cured* concurrently with these scrofulous glands; but I am sure that their presence in good large masses (and if suppurating so much the better), is the guarantee for a prolonged existence to your patient. I have such an example under my care at this moment. How this happens can only be theorized on, but it is not unreasonable to suppose that there is a derivation from the lungs to the glands; that what tubercular matter is deposited in the glands would have been deposited in the lungs had there not been glandular irritation to attract it there. With the humoral pathology the old terms of that pathology will come into use, and we may say, with regard to scrofulous diseases and deposits, *ubi irritatio ibi fluxus*. The old methods of treatment adopted by the old humoral pathologists will come again into vogue; and I cannot doubt that, in the gouty and scrofulous cachexies, *derivants*, such as issues, setons, and perpetual blisters, may be, and are, of advantage.

There is another case of tubercular phthisis lately admitted in the person of a young man of the lymphatic temperament and very fair complexion: he is in the last stage. A man, aged 50, that some of you visited regularly, died lately of the same disease.

I find that of 53 deaths I have lately certified 9 were from tubercular phthisis, 6 from mesenteric disease, 3 from scrofulous meningitis, 2 from scrofulous abscesses. These figures do not, of course, shew the relative prevalence of scrofulous disease, but they show considerable prevalence; and I believe this is to be attributed in a great measure to the sad condition of the abodes of the poor. The poor woman with the muddy-grey complexion and scrofulous axillæ and neck, lately lost a child from tabes mesenterica. Go to her home, and see in what a condition it is. You have first to enter a damp narrow passage from the street, then you ascend a narrow staircase, slippery with dirt, and nauseating from the heavy fœtid atmosphere within it. You literally grope your way up; right and left, in single rooms, are separate families, and at last you arrive at her wretched room on the right, and the heavy closeness of the atmosphere there is worse than even in the dark narrow staircase you have left. How is it possible for health to be maintained under such circumstances, and especially how is it possible for a scrofulous patient to be cured in such an abode? Of what use is quinine, or iodine, or iron, or cod-liver oil, or tonics, against the incessantly depressing agency that surrounds the poor patient? I must confess that it sometimes occurs to me to consider the Dispensary treatment of scrofula the most ridiculous thing in physic. But if you establish a hospital for the cure of scrofula, and if, on the coast, you erect some pleasant retreat for the scrofulous poor, what an absurdity to do this and leave the miserable chambers to which you return them, in the same condition as that which produced the disease at first! Various plans have been recommended for the better ventilation of these dreadful abodes. Mr. Toynbee, an active and intelligent surgeon in London, has introduced a cheap method; he puts panes of perforated zinc into the windows. I have tried this plan, but have found paper pasted over the perforations in a little while. These smothered up people cannot bear the cold that we can, with plenty of good blood-corpuscles carrying oxygen vigorously to every part of the system, and keeping up the animal heat. I am of opinion that nothing short of a radical change in cottage architecture will effect what is wanted. The present abodes of the poor are as far behind science as the ancient pack-horses behind modern railways. I am happy to say that a Health of Towns Association is now established in York, and I trust much good will result from the diffusion of information on all matters relating to the health and comfort of the working classes. Several influential members of the profession are willing and ready to cooperate with intelligent laymen in a strenuous endeavour to prevent disease, and render English men and women more able, both physically and morally, to do and to suffer that which is allotted to them. This is the highest object of medical art and science; you need not fear to cooperate for its attainment. Hostility must be expected;

for whatever disturbs the ordinary current of men's ideas and proceedings will necessarily raise a clamour; just as the mountain stream chafes and brawls against the rocks that interrupt or turn its course. That there is a clamour raised is no proof that you are right; the stream will chafe as impetuously against a mass of virgin gold as of granite. It would therefore be in ridiculously bad taste to infer from this the excellency of your cause, or of your doctrines, just as some persons compare themselves to Galileo, or with Harvey, because their supposed discoveries are doubted, criticised, or ridiculed. You must be convinced *in your own minds* that your mission is to alleviate human sufferings, and to save and prolong human life; not by iodine, quinine, or calomel only, but by an enlightened and comprehensive system of public hygiene. With this thorough conviction you may derive encouragement from the imputation of interested motives. If a shrewd selfish practitioner accuses you of the intention to puff yourself into practice, the probability is that professional success *will* reward your sincere attempt to do your duty. If you are accused of seeking, not the public good alone, but some pleasant office, you may answer, that the soldier is not blamed if he gallantly mounts the breach with the hope of promotion, nor the clergyman, if he be more learned and more pains-taking with the prospect of advancement; and you only imitate their good example. It is the highest wisdom, and the greatest good sense, so to act that the public good and your private interest may be advanced together. For my own part, I think our object should be the *utter extirpation* of continued and typhus fever from this country, and the reduction of deaths from scrofulous diseases, from phthisis and tabes, to a minimum. I am firmly of opinion that the medical profession may work a much greater reformation in society than has yet been attained to, and I trust the rising generation of medical practitioners will set this object before them, and make their political arrangements with a distinct reference and subservient thereto. In the presence of such an object how paltry the squabbles about "grades," and points of etiquette!

MEDICAL LEGISLATION.

Out of one hundred and seventeen new statutes passed during the last session of Parliament, there are only four which affect the medical profession—9 Vic. c. 6, Treatment of Fever in Ireland; 9 and 10 Vic. c. 37, Law of Coroner in Ireland; c. 84, Lunatic Asylums and Pauper Lunatics, England; c. 96, Removal of Nuisances.

Original Communications.

CASE OF

MALIGNANT FUNGOID DISEASE OF THE TONGUE.

By Robert Ceely, Esq.
Aylesbury.

Communicated by W. Lawrence, Esq. F.R.S.
Surgeon to St. Bartholomew's Hospital.

Sir,—When I delivered at St. Bartholomew's Hospital the lectures on diseases of the tongue, which are printed in the 1st volume of your new series, pp. 703 and 796, I had not seen any instance of fungus hæmatodes affecting that organ, nor do I remember any record of such a disease. Since that time, my esteemed and respected friend, Mr. Ceely, of Aylesbury, has met with a striking example of this rare malady. He was kind enough to offer me an opportunity of seeing it; and he has since been so obliging as to send me a very interesting narrative of the case, with two coloured drawings,* and an account of the appearances found on examination after death, allowing me to send them for publication in the Medical Gazette, as an appendix to my lectures before mentioned. After perusing this report, marked by that perfect precision and clearness which characterise every thing written by Mr. Ceely, we cannot fail to agree with him in the following observation respecting the proper designation of the disease:—"Thinking, with Dr. Gooch, that Sir C. Clark's cauliflower excrescence of the os uteri ought to be called fungus hæmatodes, I really do not see what we can call Mrs. Stone's disease other than fungus hæmatodes of the tongue."—I remain, sir,

Your very obedient servant,
Wm. Lawrence.

Whitehall Place, Nov. 10, 1846.

Martha Stone, æt. 57, residing at Aston Clinton (Bucks) married; dark, sallow, sickly, complexion; of a nervous temperament, and habitually dyspeptic, consulted me at Aylesbury, on account of a nervous affection of the eyelids, on the 1st of September, 1845, and, when on the point of taking leave, recollected she wished me to inspect a small swelling under the tongue. The tumor had been in existence, as she supposed, about a fortnight; it gave her no uneasiness, and she scarcely thought it worthy of notice. It was seated at the posterior part of the tongue, immediately under the right margin of the organ; was about the size of a pea, and resembled a loose spongy granulation, but was of a dark livid hue. The absorbent glands in the vicinity did not appear to be affected; still, from my knowledge of her constitution and habit of body, I looked on the case as one of a very suspicious character, particularly as the absence of teeth or stumps of teeth in that side of the jaw precluded the likelihood of local irritation as the primary cause of a pre-existing ulcer on the site of the present fungus. There was no perceptible alteration in the immediately surrounding structures; the tongue was furred, but free from the least tenderness. Under these circumstances, attention was directed to the improvement of the general health, and nothing more than the Tinctura Ferri Sesquichloridi applied to the fungus one a day.

---

* The coloured drawings which accompany the case are most beautifully executed; but we doubt whether the appearances could be accurately represented by wood engravings; and therefore omit them.

On the 6th September, the fungus had attained to double its former size, and, while carefully examining its base, the mass peeled off, leaving an irregular, soft, bleeding surface. The portion thus accidentally and easily detached resembled a firm coagulum or a fragment of softened spleen, which was easily broken between the fingers, exhaling a fœtid odour. With a view to restrain the hæmorrhage, the nitrate of silver was applied, which was soon successful.

13th.—The fungus was re-produced, equal to the size of a filbert nearly, and some tenderness and visible enlargement of the absorbent glands under the base of the jaw and in the neck were observed and complained of. There was still no pain in the tongue; but on the other side, next the fungus, the fur on the surface of the tongue has separated, and exposed a morbid redness, with a slight purplish tint, to a small extent. Sleeps well; appetite as usual, and digestion not good; pulse small.

20th Sept.—The fungus has increased to the size of a small walnut. It was again detached by passing the finger round the base for examination. The mass now removed was of a firmer texture, yet readily friable. The denuded surface was not only more extensive, but more irregular and jagged; thick short filaments of firmer texture than the mass removed, remaining pendulous from the edges of the raw surface, particularly on the side corresponding to the margin of the tongue. A careful examination of the margins of the denuded surface detected no hardness; but now there is evident tenderness, especially towards the surface of the tongue in the vicinity of the disease, which exhibits a malignant livid hue: the remainder of the surface of the organ, as far as the mesial line, is morbidly clean, red, and glossy; the left half of the tongue is still furred. On this occasion the hæmorrhage was considerable. The absorbent glands are more swollen and painful, but hard; and the patient's health and spirits are much affected; the sleep is natural. A solution of chloride of sodium was directed to be injected into the mouth, which was continually occupied by a fœtid sanious discharge.

27th.—The fungus has already attained more than its former size, preventing mastication, interrupting deglutition, impairing and occasionally destroying articulation, and filling the mouth continually with a fœtid and disgusting discharge. The sub-maxillary and cervical absorbent glands rapidly enlarging and more painful; still very hard. While examining the tumor it became partially detached, and it was therefore deemed advisable to remove with the finger as much of it as possible. But it was evident that the denuded surface was more irregular and jagged than before, and bled more freely. It was manifest, too, that the base of the fungus had greatly enlarged over the upper surface of the tongue, and extended more deeply beneath it. The organ now is considerably elevated.

Oct. 4th.—The fungus has recovered more than half its former size; much fœtid and sanguineous discharge from the mouth; absorbent glands harder, larger, and more painful; pulse quicker and weaker: sustained by wine and beef-tea.

10th.—The tumor much larger, the patient in all respects worse.

11th.—Mr. Lawrence saw the case to-day. The fungus now projects beyond the lips, measuring at least five inches in circumference in one direction, and three inches in another. It is of a dark, dirty, blackish grey colour on the surface, as it appeared soon after the second or third removal. It bleeds if roughly handled, and continually exhales a most offensive odour. The fungus extends backwards under the tongue, raising the organ considerably, and displacing it to the left side of the mouth; so that the apex of the tongue is behind the left angle of the mouth. The absorbent glands are more enlarged and painful; still hard. Pulse small and feeble; deglutition very difficult; speech unintelligible.

13th.—The fungus having now protruded so far beyond the lips as greatly to incommode the patient, it was again detached by the fingers, as far backwards as possible; but a considerable portion remained attached and out of reach, the circumference of which appeared very painful to the touch. The mass removed was sent to Mr. Lawrence. It was very fœtid, rather firmer than before, exhibited an irregular and granulated surface, not unlike a fragment of placenta, but scarcely so firm. [With the very peculiar soft, friable, and spongy mass, loaded with blood, which, although not exactly similar to any other morbid production that I have seen, resembled some of the more vascular specimens of fungus hæmatodes developed in the inter-muscular cellular texture, especially in its red colour, friability of texture, and the facility of separation from the surface which had produced it. I received from Mr. Ceely a letter, of which the following extract contains particulars not mentioned in his account. W. L.]

"Enclosed you will find the greater portion of the fungoid tumor which I removed this afternoon from my unhappy patient's tongue. I have thought it better to transmit the same in a piece of bladder, lest, if immersed in spirits, the colour and general appearance should be destroyed. I trust by the time it reaches *you no material alteration in these respects will have occurred.*

"*On my visit to the patient this* afternoon I found that she had taken more nourishment by the mouth, and had not suffered much pain or uneasiness, though the tumor was manifestly larger. It had protruded further out of the mouth, the tongue was thrust more to the left side, and was more swollen; the lips, &c. were more œdematous. The surface of the tumor was in many places blacker, and a sero-sanguineous fluid had often oozed from the upper part. By retracting the angles of the mouth, directing the patient to thrust the tongue forward, and at the same time raising the tumor over the lower lip, it was brought so far forward as to become girt round its broad base by the whole circumference of the mouth, where it remained fixed. It then felt quite elastic, and measured longitudinally five inches; transversely three inches. While in the above situation I placed my fingers under the tumor, and, gently raising it from the base, it peeled off, as it had done before, leaving a large jagged surface, which was soon covered with coagula from the oozing vessels. The hæmorrhage was moderate, and easily repressed with the matico leaf in coarse powder.

"The portion removed, on its raw surface, resembled very much a recently detached placenta, though perhaps less firm: a spongy granular mass with interstitial fluid blood. It had none of the shaggy filamentous appearance of cauliflower excrescence when detached from the uterus. The weight of the mass removed was 17½ drachms."

[The morbid mass, which is preserved in the museum of St. Bartholomew's Hospital, was examined microscopically by Mr. Holmes Coote, who has favoured me with the following report of what he observed. W. L.]

"The tumor removed from the tongue by Mr. Ceely was an irregularly lobulated, soft, and easily friable mass, of reddish brown colour, with numerous red points, but without any distinct arrangement of vessels. It was composed of masses of cells and blood-discs, and of a thickish fluid, which, when immersed in alcohol, coagulated into layers or fibres.

"The cells were caudate, bi-caudate, kidney-shaped, club-shaped, or even roundish, with large nuclei and nucleoli. They did not entirely resemble the cells composing soft cance

"I took a portion of it to Mr. Quekett, and he told me that he had examined a similar growth removed from some part of the mouth by Dr. Ward of Kensington.

"There did not appear to me to be any resemblance between Mr. Ceely's tumor and those growths somewhat vaguely included under the head of epithelial."

16th.—There is a considerable reproduction of the fungus; frequent bleeding from its surface.

24th.—The tongue has acquired its former dimensions, protruding between the lips; frequently bleeding on the slightest touch, and continually yielding a copious, sanious, offensive discharge. Glands greatly enlarged; one of the cervical softer in the centre, but the skin natural: complains of much pain in them. Liquid food in small quantities swallowed with difficulty. Now keeps her bed.

29th.—A sketch of the disease was this day taken by Mr. Thomas Atchison. It very correctly depicts the appearances at the time; the tumor protruding far beyond the lips, extending under and over the right side of the tongue, and backwards to the throat, thrusting the member to the left side of the mouth, and to a considerable extent out of the mouth. The tumor is irregularly and imperfectly lobulated, and partially divided by a deep transverse sulcus. The mass, in general, presents a dull purplish hue; and from its fissures exudes a thin greenish-yellow ichor, mingled with blood. Drops of blood occasionally trickle from its surface. The base of the tumor is of a brighter purplish hue, and that portion of the tongue immediately in connexion with the base is congested, shining, and very tender to the touch.

The pulse is now very weak and quick; the patient sleeps tolerably well, still swallows a little wine, and complains only of pain in the enlarged glands and along the course of the cervical cutaneous nerves.

Nov. 3d.—The tumor is now so large as to nearly preclude the introduction and retention of a little wine; the complexion is now very sallow, and the diseased glands sensibly larger, and one sensibly softer. An attempt was once more made to remove a portion of the tumor, but it was found impracticable to peel it off further back than the margin of the lips, so that no great facility in the introduction of wine was thereby obtained. Even this partial detachment of the fungus appeared to give pain, and certainly caused considerable hæmorrhage. The extent of the mass still within the mouth may be conceived by an inspection of Sketch No. 2, taken at the time. It exhibits the bleeding, livid, spongy mass, with its black margin parallel with the upper lip, forming a portion of the upper irregular surface of the tumor, which extends to the posterior part of the mouth; and the outer and lower margin which forms the anterior boundary of the fungus, firm, livid, and tender, involving the substance of the tongue, much protruded at the left angle of the mouth; also, enlarged glands, one softened; the skin slightly discoloured, yet not soon likely to ulcerate; the countenance full of wretchedness, yet the patient calm and able to sleep; pulse feebler.

8th.—In all respects worse; a slight increase of the fungus, the surface of which is now rather irregular, somewhat dry and black.

15th.—Still worse in all respects. Tumor manifestly increased; glands larger, and more painful.

16th.—Death has at length put an end to her misery, of the approach of which she was perfectly conscious.

Post-mortem appearances.

On the 17th the inspection was commenced by dissecting off the integuments of the neck, the jaw, and part of the face, and freely exposing the seat of the disease. There were four absorbent glands manifestly implicated, and the fungous growth had extended deeply into and beneath the tongue, and posteriorly towards the throat. On detaching the glands, the least was found to have acquired a volume larger than a walnut; the largest was equal to the size of a pullet's egg. Three of the glands were firm and unyielding, one—that which appeared for some time past to be softening—seemed (now that it was detached) on pressure, to contain a fluid, though it was manifest that its parietes, except at one small spot, were thick and firm. On making a section of the three smaller glands, the structure appeared to be dense, firm, white, and fibrous, or semi-cartilaginous; in the centre of one of them only was seen a slight degree of dull red or chocolate-coloured incipient softening. When a section was made of the largest gland, the centre was found to contain a soft, partially diffluent, bloody, brain-like pulp; while the greater portion of its circumference (except at the part where the softened mass was advancing from the centre to the circumference) was of the same dense, white, fibrous structure as the other glands. The mass of the fungus of the tongue appeared softer than during life, and readily broke up under the fingers; and being still further cleared away by the sponge, was found to spring from a shallow cup-like cavity embedded on the side and substance of the tongue, and the parts beneath, the circumference of which was not less than six or seven inches. The walls of this cup-like recess felt firm and resisting, and when divided gave the same grating sound as did the glands on division, and presented, on examination, the same dense, white, fibro-cartilaginous texture. The thoracic and pelvic viscera were healthy; so were those of the abdomen, except the liver, which was dark-coloured, enlarged, and much indurated.

Aylesbury, Sept. 14th, 1846.

AN ANCIENT RELIC ON THE SUPPRESSION OF QUACKERY, *circa* 1422.

L'Ordinance Encontre les Entremettours de Fysyk et de Surgerie.

Item pur ouster meschieves et perils qe longement ont continuez dedains le roialme entre les gentz par myceux quont usez larts et le practik de fisik et surgerye pretendantz foi bien et sufficeaument apris de mesmes les arts on de verite non pas estes a grand deceite a le peuple. Si est ordeinez et assentux en ceste parlement qe les seigneurs du counseil du roy pur le temps esteantz aient poair per auctoritie de mesme le parlement de faire et mettre tiette ordinaunce et punissement envers ceux persones qe desore evanant voirant entremetter et user le practik des dits arts et ne sont ny hables ne approves en yulles come app'ent as mesmes les arts œsstas-avoir ceux de fisyk en les universities et les surgeons entre les mestres de cell arte et ceo come semblera as ditz seigneurs les plus convenables et necessaire en le cas selonc lour bon advis et discretions pur le surete de le people.—*Rot. Parl. IX. Hen. V.*

OBSERVATIONS ON TWO FORMS OF DYSMENORRHŒA.

By Henry Oldham,

Physician-Accoucheur and Lecturer on Midwifery at Guy's Hospital.

Since writing the following observations, I have seen a paper on the dysmenorrhœal membrane by Dr. Simpson, in which he has adopted the same view of its formation as that which for some time I have maintained. In my lectures at Guy's Hospital I have habitually described the dysmenorrhœal membrane as a false decidua, being formed by the enlargement of the uterine glands in the same way as the uterine decidua. I am glad, however to be able to refer to a complete notice of this view in a clinical lecture of mine published in the Medical Gazette, April 16th, 1846. After noticing some morbid changes of the uterine glands, the following sentence occurs:—"But it is particularly the action of the ovaries which calls forth their growth; and I hope in a subsequent lecture to shew you that the membrane which in one variety of dysmenorrhœa is cast off from the uterus, is in fact formed by these glands." It is just this view, and no other, which I have extended in this paper, and which forms the leading fact in Dr. Simpson's.

There are two forms of dysmenorrhœa, which admit of being well defined: the one is, where the os uteri is too narrow, and thus the flow of the menses is impeded, and, as I shall endeavour to shew, is generally scanty; and another form is to be distinguished by a membrane being cast off from the cavity of the womb. The former may well be called mechanical dysmenorrhœa, and the latter membranous dysmenorrhœa. In the present communication I propose to make a few observations on both forms of this disorder.

The two following cases are selected, to illustrate, by their contrast, some practical points on the mechanical form of dysmenorrhœa.

Case I.—*Painful and scanty menstruation in a married woman; sterility; division of cervix; cure.*

Jane C——, æt. 31; a tall, rather

stout young woman, apparently in good health, has been married two years, but without pregnancy. She applied to me for advice on the 26th of October, 1845, complaining of severe suffering during the menstrual periods, and particularly of her sterility. She had been reproached by her husband for being unlike other women in this last respect; he had treated her with great indifference, and had caused her much distress. She has always menstruated with pain and sparingly, but since her marriage the periods have been still more painful. They recur once a month, and the flow is preceded for two or three days with dragging rending pains (these are her own words) at the lowest part of the abdomen, with a burning and tense sensation about the vulva, with occasional pruritus. Sexual intercourse is painful for a few days before the period; the seat of pain being deep within the pelvis, probably the uterus itself. The pelvic pains diminish when the flow commences, but she then experiences a sense of cold, with pain above the groins, and a great deal of backache. At first the discharge is thin, and of a light green colour; it then gets more red, but pale, and the flow lasts from two to three days. She has had a slight leucorrhœa during the intervals, but not at the present time, or for the last three months. She has just passed through a period. On examination the uterus is well placed, and perfectly moveable, and feels to be of normal volume. The cervix projects into the vagina as it should do; its tissue is soft and impressible, and it is not painful to the touch, but the os uteri is extremely small and contracted, like the hole of a common watch key.

I resolved, in this case, to dilate the os uteri with the concealed bistoury which Dr. Simpson invented for the purpose, which was done without difficulty on the following day. The os was incised on one side without causing pain, and with scarcely any bleeding. A small-sized sponge tent coated with tallow was then fixed in the os uteri, and the patient was kept in one position without moving. The bladder had previously been emptied. On the following day a common metallic sound was passed without difficulty or pain, and the length of the us from the fundus to the os uteri was found to be 2½ inches. Between this time and the next monthly period, I passed, at intervals of a week, stems made of German silver, gradually increasing their size, and they were kept in the channel of the cervix for half an hour without producing pain. By these means the cervix and os uteri were dilated as much as was necessary.

On the 10th of November, 1845, the report is, she has passed through a monthly period more freely than she has ever done. The flow lasted five days, and with scarcely any pain. She is in good spirits, and is very grateful for this relief. I passed a full-sized metallic stem without difficulty.

This patient visited me every week or fortnight, during which I treated her principally for a cough and hoarseness to which she was subject, without touching the womb.

On the 2d of Feb. 1846, she complained of severe pruritus at the commencement of the last catamenial period, which had not left her entirely since. The pain was referred to the inferior part of the vulva. This symptom was effectually relieved by a fomentation of the Dec. papav. liq. plumb. diacet.; aperient medicine and rest.

At the end of April she first missed the menses, and she is now seven months advanced in pregnancy.

CASE II.—***Painful and scanty menstruation in a single woman; division of the cervix; very partial relief.***

Matilda Rainsbury, æt. 32, an unmarried woman, of short stature, rather stout, and of healthy look, applied for advice as an out-patient of Guy's Hospital, complaining of scanty and intensely painful menstruation. The periods came on regularly, but lasted only one day, and for two days before and during the flow she suffered great agony. The pains are darting, sometimes throbbing, felt principally at the back and deep within the pelvis, with occasional dysuria. During the menstrual time she is never free from pain, but sometimes for six hours together her suffering is so severe that she is obliged to go to bed, and literally rolls about it in anguish. I tried in vain to cure this affection by attention to the general and internally, during the periods. She improved, but still suffered very severely. A vaginal examination was readily acceded to, and I found the vagina itself loose and relaxed, owing, no doubt, to a profuse leucorrhœa, which had troubled her for three or four months. The uterus was rather low down, perfectly moveable, and of light weight. The cervix was small, and the os uteri very strikingly contracted. I divided the cervix in this case at the hospital, which gave her but little pain, and a trifling bleeding followed. In two days afterwards I passed a metallic stem, and kept it within the cervix for a short time. She felt faint when the stem was passed, and I found that the length of the united cavities of the uterus and the cervix was barely an inch and 3-4ths. The metallic stem was again passed a few days before the expected period. The effect of this operation was to relieve much of the actual pain at the next period, but the flow still lasted a single day. This woman is still among my out-patients, but she continues to have scanty and painful periods, although far more bearable than before. Two months ago I again dilated the cervix, but without any better result.

It will be seen, in the first case, the benefit of an artificial section of the cervix was most marked. An immediate relief to the pain of menstruation, a greatly increased flow, and a cure to a sterility which had lasted two years, followed upon it. In the second case we notice as the result of the dilatation a partial relief to the pain of menstruation, but without further advantage. The first case affords a proof that in some cases of dysmenorrhœa the operation proposed by Dr. Macintosh, or a modification of it, is legitimate and most useful; and that by it we may, if I may so say, release the functions of the womb from a restraint which is essentially morbid. And taking the two cases together, there is also another inference, that the simple presence of a small os uteri is not enough to warrant its performance. I believe that the main distinction which ought practically to be made in the two classes of cases which I have typified by those which I have related, is *this—that in the one there is a full development of the internal organs of generation, with one error only*, namely, a morbidly small outlet to the womb; in the other the whole sexual system is but imperfectly developed, and the narrow orifice is but a copy of the deeper seated organs. This is to be distinguished by the signs furnished by an internal examination. The volume of the uterus, and the size of the cervix, in the first case, was felt to be large and well developed, and the measurement of the cavity was 2½ inches. In the other case the volume and weight of the womb was ascertained to be under the standard size, which was conclusively proved by the measurement of its cavity, which was three-fourths of an inch below the first. It is hardly necessary for me to say that any one accustomed to the examination of the uterus can tell pretty accurately by its range of mobility and the feel of its weight when balanced, with the appreciable size of the cervix, whether it is below or about the average size, and that to sound its cavity affords another and more direct proof of the fact which is sought for. There is a symptom common to these two cases on which I would say a word, viz., on the scantiness of the flux. I believe Dr. Churchill to be right, when he says that in dysmenorrhœa "the menses may be scanty, profuse, or in the ordinary quantity;" but it appears to me that this fact implies another, namely, that there is a corresponding variation in the pathological states which accompany them. In the two cases which I have related, there is, I think, to be found in the physical imperfection of the uterus itself the explanation of a diminished flow. A small and undeveloped uterus, such as I believe exists in the second case, with probably, also, small and undeveloped ovaries, would, in a person of fair health, without any blood disease, be attended with a scanty menstrual discharge. This would be the habitual character of her menstrual times. Cases of this kind, whether the flow is painful or not, ought rather to be classed with cases of amenorrhœa, to one species of which they are directly related. I am now in the habit of seeing three married women, neither of whom can be said fairly to have menstruated. They are all well developed, with full-sized mammæ, and neither of them bears the traces of a girlish look. In one, æt. 22, married three years, there was a coloured discharge, lasting about an hour, once before her marriage; and eight months after marriage there was a faint mark of a coloured discharge, but with these exceptions she has never menstruated. The vagina is capacious, the uterus small. The second is a lady of a lively temper, who has been married six years, but during her married life has never menstruated. Before marriage she had an occasional very scanty discharge, attended with very severe pain. Since marriage she had several severe attacks of pain in the region of the uterus, and every month there is a well-marked effort at menstruation. In the third there has never been a sign of a coloured discharge, but every month a white thin discharge comes on, which lasts about six days. She has now been married five years, but, as in the two former cases, she has never been pregnant. In these cases we have examples of one form of amenorrhœa, concurring, however, with good general development. And the dysmenorrhœal case I have related is one of an allied kind. In one instance there is an entire absence of menstruation, in another a vicarious leucorrhœal discharge from the sexual organs, and in the fourth a scanty flux of blood, with much local pain. In all of these I believe there is a physical imperfection in the internal organs of generation.

It will be seen, however, in the first case, that the uterus was of normal size and weight, and yet that the dysmenorrhœa was attended with a scanty flow. This I believe is owing to the smallness of the os uteri. When the orifice was opened, the next period lasted five days, instead of between two and three; and it appears to me that a partial suppression of the flow is the usual result of any obstruction in the sexual passages, which is more pronounced the nearer the obstruction is to the os uteri. The following notices of cases will illustrate the point.

Caroline Brown, æt. 31, was admitted into Guy's Hospital under my care for a contraction of the vagina following the use of the forceps seven years ago. There was a stricture from a contracted cicatrix within three-fourths of an inch of the os uteri, which barely allowed the passage of a catheter. She is in good health, but the catamenia are very sparing, and passed with much pain, lasting two days. Dilatation of the stricture was persevered in, and as the opening was increased the catamenia were passed with but little suffering, and they lasted between five and six days.

Martha Stevens, æt. 38, was admitted under my care at Guy's Hospital for malignant ulceration of the external organs. She is a married woman, and bore a child nine years ago. After this she never menstruated. The upper part of the vagina is closed by an intimate adhesion of the walls. The uterus may be felt above it, but of its natural volume. No retention of the catamenia.

Mary Paine, æt. 37, married. Menstruated regularly until four years ago, since which time they have ceased, after an attack of fever. On examination, I found the os uteri closed, a slight depression marking its site. I tried to pass a small sound, but I found the channel of the cervix quite obliterated; the volume of the womb normal; no retention of the catamenia.

In addition to these cases, I may observe, that in a case of congenital occlusion of the upper part of the vagina, with retained catamenia, it was remarked that there was a much smaller quantity than the sum of the several periods would have amounted to, and less, too, than in cases where the hymen has been imperforate, and the menses retained in the vagina, *i. e.* lower in the sexual organs.

An interesting case of perfect closure of the vagina two inches and a half within the canal, occurring after instrumental delivery, is related in Dr. Ashwell's work. Dr. A. examined this patient two years after the accident, and found the uterus small. There had been no retention of the catamenia, but a complete amenorrhœa had followed her delivery.

These facts, I think, go to show that contraction of the upper part of the vagina, and the os or cervix of the womb, tend directly to lessen the monthly flux of blood; and that this symptom, with pain at the menstrual periods, characterises the mechanical form of dysmenorrhœa. These contractions, or strictures, may either be congenital or acquired, and they may exist either at the internal or external orifice of the womb, but generally, in the cases now under discussion, at the true os uteri. It is this part and the contiguous portion of the cervix which is usually the seat of inflammatory affections, and the contraction consequent upon them, whilst the os internum is more liable to contraction, and even obliteration, towards the catamenial decline; a time, of course, which can have no reference to the present subject. The following is a summary of the views which from observation I have been led to entertain on this subject:—

1. There is a form of difficult menstruation which depends on some morbid contraction of the sexual passages, which may be either congenital or acquired, and affect either the os uteri internum or externum, or the upper part of the vagina.

2. That this form of dysmenorrhœa is usually accompanied with a scanty flow of the menses, and sterility.

3. That a great practical distinction is to be drawn between a womb which is altogether small, being imperfectly developed, and in which the os and cervix are also small, and a womb which is well developed, but with a morbidly contracted orifice. The former cases are allied to amenorrhœa; the latter are essentially cases of difficult and impeded menstruation.

4. That in this latter class of cases, which in practice will be found to be *very rare*, a perfect cure may be obtained by opening and dilating the cervix.

5. That division of the cervix, and the passage of a metallic dilator, affords an easy expedient for this purpose.

I would add only to this summary two observations: first, that I believe the imperfect state of the internal organs of generation which has been referred to is by no means rare. I have often met with it in the ordinary run of inspections, where besides the general smallness of the womb, there has been seen on opening the cavity some elevated ridges, which are directed towards the angles of the womb, showing still the uneffaced traces of the original duality of this organ.

Secondly, I think this division of the cervix worthy of attention in cases where a form of hysterical epilepsy prevails, *coming on with the pelvic pains either preceding the monthly flux or attending the first day or two* of its flow. I opened the cervix in a case of this kind with this effect; that for two months the fits which for eight months had come on with the periods with one intermission only, ceased. The patient was the daughter of a captain, and after two months she went to Portugal, and I have not since heard of her. This single case, therefore, is imperfect, but it justifies, I hope, the observation.

Cases of membranous dysmenorrhœa are by no means rare, and they are amongst the most painful, and often the most tedious, affections of the unimpregnated womb. The symptoms which accompany this disorder during the menstrual periods have been faithfully described by most authors, but it appears to me that the effect of a continuance of it, in permanently enlarging and displacing the womb, has not been sufficiently attended to. One of the most frequent and obvious results of this is, that the symptoms of disease of the womb which at first were confined to the monthly periods, continue during the intermenstrual periods. I have had the opportunity, amongst my patients at Guy's Hospital and elsewhere, of treating many cases of this form of dysmenorrhœa, but in the present communication I shall only detail one, which contains the most important points which I am desirous of noticing.

[To be continued.]

CAUTION TO DRUGGISTS—THE DUTIES OF THE ANCIENT POTICARYE.

THAT he neither increase nor diminish the phisicion's bill, and kepe it for his owne discharge.

That he neither buy nor sell rotten drugges.

That he peruse often his wares, that they corrupt not.

That he put not in quid pro quo *without aduysement.*

That he may open wel a vein for to help the pleuresy.

That he meddle only in his vocacion.

That he delyte to reede Nicolaus, Myrepsus, Valerius Cordus, Johannes Placaton, the Lubik, &c.

That he remember his office is only to be the phisicion's cooke.

That he use true measure and waight.—*C. Bullein's Bulwarke* of Defence againste *all Sicknes*, &c. 1562.

OBSERVATIONS ON THE
DISEASES OF CHILDREN.

By James Milman Coley, M.D.
Licentiate of the Royal College of Physicians, and Physician to the Western Dispensary.

In the Medical Gazette for Oct. 30th last, when treating of the cholera of infants and children, I alluded to diseases by which it is sometimes succeeded, the principal of which are, epilepsy, serous apoplexy, and fever.

Secondary Epilepsy and Apoplexy.

One of the most frequent effects of infantile cholera is convulsion of the muscles of the extremities, accompanied with more or less suspension of the functions of the brain and interruption to the process of inspiration. We find during the paroxysm in general a remarkable dilatation of the pupils, a pallid and contracted appearance of the face, and a comparatively cold state of the skin, which is succeeded by temporary warmth and copious perspiration, the results of continued involuntary muscular action. This epileptic attack is usually preceded some hours by a shrill scream and when this occurs, a convulsion of the adducent muscles of the eyes, constituting squinting, succeeds, and the case is apt to terminate in apoplexy. As the cerebral disease advances from a state of congestion to that of inflammation, effusion of serum, accompanied with symptoms of apoplexy, follows. The convulsion of the voluntary muscles is now interrupted by stupor and insensibility, and the sphincter muscles, and those of deglutition, become paralysed. Stertorous and irregular respiration follows, and, the capillary circulation partaking of the general enervation, animal heat is no longer generated, and the surface becomes inanimate and cold, and is covered with universal exudation.

In the commencement of these cerebral diseases succeeding cholera in infants, the symptoms are liable to be mistaken for what is commonly called congestion of the brain; and much time may be lost by such an erroneous *diagnosis*; and this is the more to be apprehended, in consequence of the attention of the profession having been of late particularly directed to disturbance in the circulation of the brain as a primary cause of vomiting. The opportunity of giving relief and affording the patient a chance of recovery is also too frequently lost by the prejudices of the public and the profession with respect to dentition, and the dangerous attempts which have lately been made to refer all the disturbances in the functions of the brain and nerves to simple *irritation*. With respect to dentition, the circumstance of the attack commencing with symptoms of cholera is sufficient to shew that the stomach and upper portion of the intestines are the organs primarily affected. In the diseases under consideration, the origin of the cerebro-spinal disease is in the mucous membrane of some part of the duodenum or the upper portion of the jejunum. The most inflamed state of the gums accompanying dentition never produces either vomiting or purging, which will be found to proceed invariably from a congested or inflamed state of the duodenal or jejunal mucous membrane. The effect of simple irritation is transitory; but, when it is long continued from any cause, first active congestion, and afterwards inflammation, follow. In the article *Dentition*, in my work on the Diseases of Children recently published, I have, I trust, satisfactorily proved that the effect of the temporary increased determination of arterial blood required to support this process, is to render the bowels costive, in consequence of their simultaneous enervation, produced by the diversion of the organic nervous influence towards the alveolar processes. It is true that infants are sometimes exhausted by continued involuntary muscular action; but in all such instances we shall find, on minute examination, some organic change, some vascular congestion, or some inflammation or inflammatory product. In an infant who died exhausted by continued hiccough or convulsive spasm of the diaphragm, I discovered after death inflammation and effusion of lymph in the neurilema of the left phrenic nerve, where it passed over the pericardium; and in another, who died from repeated attacks of cerebral croup or spasm of the glottis, originating in disease of the mucous membrane of the duodenum, and terminating in epilepsy, I found inflammation in the dura mater covering the cerebellum. Epilepsy produced at first by the presence of worms in the small intestines, occasioning temporary vascular congestion in the brain, will be found ultimately to be perpetuated by some organic mischief in that organ. A young gentleman subject to epilepsy, produced by the irritation of a tapeworm inhabiting the intestinal canal, became, after repeated attacks, permanently blind, from effusion of serum compressing the optic thalamus. Those who suppose that the impression conveyed by the nerves of sensation to the cerebro-spinal centres is productive only of a transitory impulse, unconnected with a corresponding vascular excitement, entirely lose sight of the effects of sudden metastasis of disease from one organ to another, and the manifest disorganisation resulting from what to them appears to consist only of a functional derangement produced by what they denominate irritation or sympathy. Such a doctrine as this in the present age of empiricism is calculated to revive the exploded pathology which suggested the exhibitions of musk, asafœtida, castor, and opium, and hurried thousands of children to an untimely grave.

The secondary disease, to which I wish to call the attention of the medical practitioner, may be distinguished from primary disease in the cerebrum by the vomiting and purging with which the attack commences, and by the absence at first of vertigo and sleepiness. In those cases of congestion of the brain which commence with stupor and vertigo, and are followed by vomiting, produced in a secondary manner through the intervention of the pneumo-gastric nerves, purging is never present: the interruption to the free circulation in the brain in the first instance, and afterwards inflammation in that organ, invariably producing a torpid state of the bowels.

The morbid appearances presented on examination after death, in cases of secondary cerebral disease, consist of effusion of serum within the ventricles, or the bag of the arachnoid, and a greater or less degree of thickening and opacity of that membrane at the basis of the cerebellum, accompanied with an inflamed state of the mucous *membrane of the duodenum*, with or *without softening of that* tunic. The inflammation of this intestine resembles that found in the colon after fatal dysentery. It occupies generally only one side of the intestine, which, from its florid and injected appearance, occasioned by the dilated capillaries admitting the red globules of the blood, affords an obvious contrast with the grey-white colour of the rest of the mucous surface. The softening of this membrane, where it occurs, is found to assume a round or oval figure, and presents a light-brown or ash-coloured appearance, not surrounded by an inflamed border; whence I conclude that it proceeds from enervation or decay of the vital principle of the part.

Treatment.—Leeches should be applied to the epigastrium, and succeeded by the application of a small blister to that region. Small doses, as from ten to twenty grains, of sulphate of magnesia, should be given internally, with tincture or infusion of gentian, once in three or four hours. After the first symptoms of cholera have been relieved by opium, as directed in my former communication, that medicine must be studiously avoided, on account of its tendency, in the absence of pain, to produce congestion in the vessels of the brain. With the view, therefore, of directing morbid excitement from this organ, the bowels must be stimulated by the frequent repetition of the aperient medicine I have mentioned, or by rhubarb and carbonate of magnesia. With respect to the cerebral disease which I have described, as supervening on that of the duodenum, great circumspection will be required in the use of bleeding, on account of the tendency to serous affection always observable in such cases, which the abstraction of blood and the exhibition of calomel, the ordinary means employed, appear to promote: for it must be observed that the infants most liable to secondary meningeal inflammation are those whose muscular and vascular systems are feeble, and whose capillaries are peculiarly prone, when inflamed, to relieve themselves by serous effusion; an effect which appears to be directly produced by the collapse, superinduced by loss of blood in the state of anæmia observable in those who are the subjects of this disease. When, therefore, the face remains contracted and pale, and the skin cool, it will be found the safest practice is to abstain from bleeding, and to diminish the cerebral circulation and obviate effusion by the prompt exhibition of digitalis. From numerous experiments which I have lately had an opportunity of instituting in the treatment of secondary meningitis in cachectic infants, I am inclined to believe that this medicine will be found to exercise remarkable influence in averting the fatal termination of that destructive disease. As my object at present is to attract the notice of the profession to the existence of epilepsy and apoplexy as occasional results of cholera in infants, I need not at present enter more fully upon my views with respect to the exhibition and modus operandi of digitalis. I therefore proceed to exemplify my description of these secondary diseases, by a detail of one of the cases which have occurred in my practice.

CASE.—An emaciated feeble infant, 15 months old, was attacked with cholera on the 8th of last month, which was succeeded by vomiting till the 12th, when the latter symptom ceased, and was followed by a fit of violent screaming. On recovering from this attack the patient was observed to squint; each eye being convulsively drawn in a direction towards the nose. About four hours after the screaming occurred, epilepsy commenced and continued almost without interruption. At length apoplexy supervened, and terminated the life of the infant at the end of thirteen hours after the commencement of the convulsions. I was not consulted until after the fatal attack had established itself, when I found the features contracted, the face assuming a pale cadaverous aspect, and the skin covered with a cold perspiration. The pupils were widely dilated and the eyes sunk within their orbits, and the bowels rendered torpid by the cerebral disease. Leeches had been applied to the temple, and calomel and aperients and the warm bath administered in vain. It was observed that after the bleeding had commenced the convulsions diminished and the apoplexy increased; effusion having been accelerated by the collapse consequent on the loss of blood. Having expressed an opinion that disease would be found in the duodenum as well as in the brain, and being desirous of ascertaining fact, the body was examined in my presence by a surgeon about fourteen hours after death.

Post-mortem appearances.—A considerable effusion of serum, amounting to an ounce and half, was found within the bag of the arachnoid, and the pia mater was more vascular than usual; being in several places on the upper surface of the brain gorged with blood. Some serous fluid was also discovered in the left ventricle, and about three or four drachms of serum were deposited on the pons varolii, beneath the arachnoid membrane, which was thickened and opaque. The stomach was sound. In the duodenum we met with decided inflammation occupying the left and posterior surface of the mucons membrane; the villi at those parts being as florid and as much injected with red globules, as they are found to be in the colon and lower portion of the ileum in fatal cases of dysentery. At some distance from the inflamed portion two distinct oval patches of softening were seen in the mucous membrane, of a dark grey or ash-colour. The serous coat of the intestine was unaffected, and, owing to the natural density of the duodenum, presented no external discoloration like what we find in the inferior portions of the alimentary canal, denoting the presence of internal inflammation. This absence of external discoloration in the peritoneal coat of the duodenum, and the trouble occasioned in separating that intestine from the parts to which it is attached, have probably often been the cause of inflammation in its mucous membrane being overlooked in the post-mortem examinations of the alimentary tube of infants.

As the arachnoid membrane exhibited at its expansion over the pons varolii the decided effects of inflammation, which I have been describing, I suspect that the screaming of the infant and the subsequent convulsions were produced by the sudden effusion of serum compressing that important division of the brain, to which, as the distinguished pathologist, Mr. T. W. King, very truly observes, all motor nerves converge.* In acute meningitis every time an increased effusion of fluid takes place, the child expresses a shrill and distressing scream, and I apprehend that as soon as paralysis or general convulsions occur the inflammation of the arachnoid membrane will be found to have advanced to that portion of it extended over the pons varolii.

---

* S
Conv
Tim

47, Chester Square, Nov. 9th, 1846.

A CASE OF

FRACTURE OF THE CRANIUM, WITH DEPRESSION AND SUBSEQUENT HERNIA CEREBRI.

By George Harvey, Esq. Surgeon.

[Concluded from p. 875.]

Aug. 1st.—Wound looks well; discharge of healthy pus continues.—To sit up a little every day; appetite good; bowels regular; pulse 30; requests he may be allowed a little stewed rabbit, to which I have assented. Measured the protrusion: long diameter, 2¼ in.; short diameter, 1¼ in.; height ½ an inch.

3d.—A cough, to which he has been several years subject, unusually troublesome to-day; a free expectoration of mucus, but no thoracic pain; pulse 76, weak; enjoyed his rabbit, and slept well; wound looks well; a free discharge of pus.—Omit Bibirine; diet as before.

4th.—Wound looks remarkably well; granulations from the scalp united in several places to the protruded brain, and gradually drawing it downwards; bowels open; cough better; pulse 72; appetite good.—To have a mutton-chop and potato. Sits up, and is anxious to go down stairs; this I do not allow for fear of accidents.

5th.—Improving; relishes his food: bowels regular; pulse 80; nearly recovered from the paralysis of his arm, but articulation and memory still defective.—Omit the medicine; dressed as before.

6th.—Much as yesterday; permitted to come down stairs, but desired not to go out, as the weather is very hot.

7th.—Protrusion so reduced as to be nearly on a level with the scalp, which it overlaps on the lower and posterior part; on the anterior, the scalp adheres to the surface of the protrusion; the *edge of bone, where the trephine was applied, still firm in its situation*; the *dura mater beneath this* opening looks sloughy; the pulsation of the arteries at this spot very visible, but no protrusion in this situation; the hernia cerebri proceeding solely from the wound in the dura mater produced by the depressed bone; bowels regular; pulse 72; has gained flesh since he has been allowed a better diet; discharge of healthy pus in moderate quantity; his defective memory and articulation are the only unpleasant symptoms; a few days since I told him his pulse was 72, and desired him to remember it on my next visit. The next day I purposely omitted feeling his pulse, and when I took my hat and was leaving the room, he very anxiously enquired "how many," holding out his hand. I asked if he remembered what was the number of his pulse yesterday, he replied "yes sir, two, four." This is impaired, but not lost memory, and I hope will be recovered.

8th to 10th.—Much as usual; observing him to walk lame, I enquired the reason, when his sister informed me he had been so since the first attack of paralysis, but it was very slight, and as he was confined to bed was hardly noticed; the wound very healthy; granulations on every side uniting the protrusion to the scalp; dressed as before; a slight tumefaction observed just above the zygoma, about an inch in front of the ear, from which a little pus was pressed out at the lower edge of the wound; articulation improved. —Diet as usual.

11th to 14th.—Swelling above the zygoma noticed on the 10th increased, but not painful; wound healthy. Mr. Fitch visited him with me to-day, and is much surprised at his improvement.—Gave him Sp. Ammon. comp. gtt. xxx. in a glass of mist. camphoræ, hoping to relieve his paralysis; desired the draught to be repeated at bed-time; dressed.

15th.—Wound looks well; very little discharge; swelling rather more than yesterday; the whole of the temporal region considerably more prominent than natural, but the integument is not altered in colour; pressure gives no pain, neither is there any fluctuation or doughy feel; it may be matter under the temporal muscle, but until it becomes more clearly manifest I do not feel warranted in making an opening, particularly as the wound is healing rapidly; the edge of dead bone is entirely concealed by the granulations he thinks the paralysis increased to-day, but I can perceive no alteration, he walks as firmly and speaks as well as yesterday; I permitted him to walk in the garden in front of his cottage to-day, which he greatly enjoyed; pulse 80; bowels regular; but as he thinks the paralysis increased, I desired him to take the calomel and jalap at bed-time.

16th.—Has been very sick, and several times purged to-day. During the act of vomiting an increase of protruded brain occurred, which has broken through the granulations uniting it to the scalp; enlargement of the temporal region increased. I have now little doubt but this enlargement is caused by the protruded brain being forced underneath the integuments, but whether from internal hæmorrhage, or the force of the circulation driving the brain through the wound in the dura mater, I cannot determine, but am inclined to the latter opinion, as I think hæmorrhage would have proved fatal long since. The vomiting has ceased for some hours, but the purging continues; I therefore gave him Tr. Opii, gtt. xxx. (Cholera morbus is very prevalent, and I consider the vomiting and purging to be of this nature, and quite independent of the fracture and its consequences, although the act of vomiting produced the unfortunate increase of protrusion.)

17th.—No return of cholera; slept well; wound much as yesterday, but an increased discharge of healthy pus; pulse 80. Dressed with very slight compression.

18th.—Paralysis decidedly increased; speaks very indistinctly, and complains of headache; bowels opened twice to-day; pulse 90. Protrusion again uniting to the scalp; dressed as yesterday.

19th.—Paralysis much the same; wound healthy; a small slough on the upper edge marks the situation of the dead bone, which I ascertained by the probe this morning; pulse 84. Dressed as usual.

20th to 22d.—Very comfortable, and may be considered as having recovered from the attack of cholera. The wound is filled with healthy granulations; these granulations are in several places covered with a film resembling cuticle; but as the granulations are produced by the brain, I conclude they are brain-like in structure, and will never form a firm cicatrix; however, I shall wait till the dead bone has exfoliated, when, if the efforts of nature prove unequal to forming a firm covering, perhaps the best plan will be to cut away the protrusion, pare the edges of the scalp, and bring them as nearly in contact as possible by sutures and strips of plaster. Some considerable time may elapse before exfoliation takes place; till then I shall dress with cautious pressure.

24th.—Going on favourably. In order to promote the cicatrization which nature is attempting, I this day dressed the surface with Ung. Gallæ Comp. spread upon lint, and secured with adhesive strips and a flannel roller.

25th to 29th.—The Ung. Gallæ fully answers my expectations; the protruded brain is greatly contracted, and nearly covered with cuticle. No headache or other inconvenience, except from the paralysis. When the wound is entirely healed perhaps electro-magnetism may be of service, but not till then.

31st. — Progressing favourably; wishes to have a liniment for his arm and leg. To satisfy him I gave him a volatile liniment, but I expect no benefit from it.

Sept. 2d.—Two small exfoliations came away to-day, apparently part of the squamous edge of the os temporis.

4th.—Mr. Seymour visited him with me to-day, and considers him in a very favourable state. The protrusion is now entirely covered with cuticle, excepting three small places on the edge, whence exfoliations may be expected. Dressed as usual.

5th to 8th.—Progressing favourably. Was driven to my house at Castle Hedingham to-day, the distance two miles and a half, and greatly enjoyed it. Dressed with dry lint only, and a flannel roller. The liniment prescribed August 31st was only used twice, as he thought it caused headache and an increase of paralysis; this, according to Dr. Marshall Hall's theory of the reflex action of the nerves, might be expected. The paralysis is certainly relieved since the exfoliations were thrown off on the 2d instant.

10th.—Came to Hedingham again to-day. Wound looks very well; small blood-vessels ramifying from the edges of the scalp over the cuticle, covering the protruded brain.

13th.—Visited him at his own house to-day. Accidentally met Mr. Mason, who was much pleased and surprised at his appearance. A small exfoliation to-day. Dressed as usual.

17th.—A messenger was dispatched to inform me that he had been attacked with a severe rigor followed by vomiting. I found him lying senseless, with stertorous breathing and pupils widely dilated, and nearly insensible on the approach of a lighted candle; pulse 120, and hard; the wound looks as well as usual, and no swelling or puffiness of the scalp. I immediately bled him to the amount of thirty ounces from a large orifice, and summoned my partner, Mr. Seymour, to my assistance. Mr. Fitch being in the neighbourhood, attended also. The wound looking so healthy, and no puffiness about the scalp, it was not thought necessary to make any further opening, or to interfere with the wound, which I was at first inclined to do; but on considering that the rigor and vomiting were accompanied with a quick hard pulse, the apoplectic symptoms were thought more likely to be caused by a congested state of the brain than by the presence of extravasated blood or pus. Calomel gr. vj. were placed on the tongue, and a spoonful of saline mixture immediately after. The blood, on cooling, presented a thick buffy coat, and was cupped.

6 P.M.—Remains in the same state. —Cap. Calomel gr. ij.; Jalap. gr. v. 4tis horis. Head covered with a wet rag, and no bandage.

18th.—Much better to-day; apoplectic symptoms abated last night. On sensibility returning, his first desire was to have the roller replaced round his head; he afterwards passed a large quantity of urine (about two pints), and during the night his bowels have acted freely. His articulation is much the same; but the paralysis is increased; the protruded brain is also somewhat increased in prominence, probably from having lost the support of the roller; pupils obedient to the light; pulse 100, and hard; face flushed; has taken nothing but tea. —Venæsect. ad ℥xx.; Calomel, gr. ij. Jalap. gr. v. 4tis horis. Blood, on cooling, *was cupped*, and had a thick *coat of buff.*

19th.—A comfortable night. Has taken three of his powders; bowels copiously relieved; stools very dark; urine healthy, and in large quantity; gums affected by the calomel; paralysis as yesterday; protrusion not increased; is very desirous of having the roller applied with firmness, repeatedly exclaiming "more, more!" during its application. Pulse 100; face less flushed.—Rep. Calomel and Jalap night and morning. Diet, tea and gruel.

21st.—Mouth severely affected by the calomel; an eruption of eczema has appeared, covering the lips, chin, and ears; pulse 100, and weak; to discontinue the powders.—Linimentum calcis to the eruption. Tea and broth.

23d.—Down stairs. Is able to walk, but the arm is quite useless; articulation very imperfect; no headache; protrusion receded, being nearly on a level with the scalp, and the cuticle covering it, instead of being tense and smooth, looks wrinkled: this I apprehend is the effect of the blood-letting. Pulse 100, and very weak; wishes for a little broth, which I have allowed. Dressed with straps and a roller.

24th.—Complains of headache. Face again flushed; eczema scabbing; protrusion more prominent; cuticle again tense, and shining; pulse 100, but soft; bowels confined; ordered to keep in bed, and have nothing but tea-sop.—Magnes. Sulph. ʒj. 4tis horis. Dressed as before.

25th to 27th.—Improving. Bowels freely open; eczema nearly well; protrusion flaccid, and level with the scalp; paralysis better; pulse 90. Continue Magnes. Sulph.

28th to 30th.—Much better. Walks with tolerable freedom, bending his knee with ease. Can raise his hand to his head, but cannot grasp anything; bowels open; pulse 84; protrusion much as usual; enlargement of the temporal region greatly diminished.—Pergat.

Oct. 2d.—Suddenly summoned this morning, on account of another attack of vomiting; the matter ejected was chiefly tea, and latterly bile. His friends can assign no cause for this attack; face flushed; protruded brain again forced up considerably above the level of the scalp, and very tense; but the adhesions to the edge of the scalp are not separated; bowels moved this morning; pulse 130, and hard;

complains of headache; pupils dilated, and nearly insensible; answers to questions readily, and as well as usual.—Venæsect. ad ℥xij.; covered the protrusion with a piece of wet lint, confined by a loose bandage. Calomel, gr. v. statim; Pulv. Jalap, ℈j. post horas duas. Head to be covered with a wet cloth. Diet, tea only.

3d.—Medicine rejected; has vomited several times during the night. On examining the head, found the two pieces of dead bone which I had long anxiously waited for lying loose; these I easily removed, and discovered several other smaller portions, altogether eight in number; these I very easily extracted, and covered the part with a wet rag. He is quite sensible, and the pupils natural; face less flushed; pulse 100, and very weak; tea or milk and water his only diet.

4th.—Sickness abated; slept tolerably well; sensible; face flushed, but the skin moist; pulse 120, and weak; very little discharge; a wet pledget to be constantly applied; bowels not relieved. Cap. Calomel, gr. iij. n. et m.

6th.—Engaged at an inquest several miles distant all yesterday, and could not see him. He now is very quiet, but answers when spoken to; sat up readily to have his head examined; discharge small in quantity, and rather offensive; protrusion not increased, and covered with cuticle, except at those parts whence the exfoliations were extracted; paralysis of the arm continues: that of the leg rather better; bowels moved twice yesterday; pulse 130, weak, and fluttering; skin moist; has taken some tea, which remains on his stomach. Pergat.

7th.—Improving. Protrusion less prominent; the parts whence the exfoliations were extracted beginning to slough; no sickness; bowels not moved; pulse 120, less fluttering; skin moist; can raise the arm about half way to his head, and is quite sensible. Rep. Calomel, gr. iij. n. et m.

8th.—Protrusion shrunk to a level with the scalp; looks dark, and inclined to slough; very little discharge; no sickness; bowels relieved three times last night; pulse 120, and weak. Takes his tea-sop readily; omit calomel, as the mouth is affected; a poultice to the protrusion.

9th.—Evidently sinking. Expired at about six o'clock in the evening.

Post-mortem examination 18 hours after death, assisted by my friend, Mr. F. N. Fitch.

The first thing we noticed was, that the portion of brain which during life had protruded was now sunk below the level of the scalp, and the enlargement about the temporal region had entirely disappeared. On removing the upper part of the skull, four small exfoliations from the squamous edge of the temporal bone presented themselves at the edge of what had been the protruded mass. This protrusion was much softer than the surface of the brain surrounding it. The edges of the parietal and temporal bones, whence the exfoliations had separated, were smooth and healthy; no puffiness of the scalp, or separation of the pericranium or dura mater, existed. All beyond the immediate seat of the injury was perfectly healthy; but, on removing the softened portion, immediately beneath its base we observed an unnatural hardness, on cutting through which a deep cavity in the middle lobe of the left hemisphere of the brain was exposed, containing about two ounces of pus and a small piece of bone of an irregular triangular shape: its shortest side measuring $\frac{5}{12}$ of an inch; its hypotheneuse $\frac{6}{12}$ of an inch; one surface smooth, like the internal table of the skull; the other surface composed of the diploë. This piece of bone had doubtless been driven so deeply into the brain on the occurrence of the accident as not to be discoverable when the depressed portions were removed after the application of the trephine, and was the cause of the abscess which occasioned the fatal termination of the case. The hernia cerebri was, as I always suspected, not caused by hæmorrhage, for no extravasated blood existed; but was the natural consequence of a portion of the brain having lost the support of the skull and dura mater. The comfort experienced from the gentle pressure of the bandage confirms me in this opinion. Latterly the accumulation of pus in the substance of the brain doubtless caused an increase of the protrusion; but the first clear indication of suppuration was on the 17th September (11 weeks and 2 days after the accident), when rigor and vomiting occurred, followed by apoplectic symptoms; but his rapid recovery from this state after he was freely bled and purged, and the comfort he experienced from a tolerably firm support by a bandage, encouraged me to hope that he would eventually recover.

I am strongly impressed with the idea that, if the piece of bone found in the abscess after death had been discovered when the trephine was applied, that, although hernia cerebri subsesequently made its appearance, he would have recovered.

MORTALITY IN THE ARMY AND NAVY.

The numbers of those who perish in battle or afterwards from wounds, is small compared to those who die from other causes. During the last three years of the Peninsular war, the total number of deaths in the British Army, amounted annually to about 16 per cent. of the whole force. Of these only 4 per cent. died in battle or of wounds which proved fatal soon after. The number of men sick in hospital usually averaged about one-fourth of the whole. In less than three years and a half, out of a force the average strength of which was 61500 men, nearly 34000 died, and of these only one-fourth fell by the sword; and this enormous mortality occurred among a body of men, all of whom, a short time previously, must have been in the healthiest vigour of youth or prime of manhood; so that it required the annual sacrifice of 6400 able-bodied men, to keep in the field a working force of less than 50000 men! If such was the amount of suffering and waste of life, when every expedient was adopted that foresight could suggest to provide proper food and raiment, and every other attainable comfort both in sickness and in health, what must it be when these precautions are neglected? Of such neglect and its terrible and execrable consequences, Napoleon's campaigns of 1812 and 1813 afford memorable examples. From want of proper supplies alone, the French troops perished literally by hundreds of thousands!

There is a remarkable difference between our land and sea services. The channel fleet which consisted of twenty-four sail of the line with frigates, &c. on its return to Torbay in September 1800, after a four months' cruise sent only sixteen men to hospital. The average mortality in the years 1810, 1811, and 1812, was only 3½ per cent: since 1830 it has not been more than 1·4 per cent., which is less than the general average among men of the same age on shore.—*Quarterly Review*, 1846.

MEDICAL GAZETTE.

FRIDAY, NOV. 27, 1846.

In a former number[*] we called the attention of our readers to an alteration which has been recently made by the legislature, respecting certificates of insanity requiring the signature of medical practitioners. We have there printed the form of certificate from the schedule of the new Lunacy Act, 8th and 9th Victoria, c. 100. At page 1434 of the same volume, will be found a letter from Dr. Willis, of Stamford, in reference to the evil results which are likely to flow from medical men omitting to obey the directions contained in the 46th clause of the Act. As we have reason to believe that many medical practitioners are still unacquainted with the alteration made in the law by the introduction of this clause, we here reprint it:—

46. "*Medical practitioner signing such certificate to specify facts upon which such opinion is formed.*—Provided always, and be it enacted, that every physician, surgeon, or apothecary signing such certificate, shall specify therein any fact or facts (whether arising from his own observation or from the information of any other person), upon which he has formed his opinion, that the person to whom such certificate relates, is a lunatic or an insane person, or a person of unsound mind."

A non-observance of this rule subjects a medical man, under the 49th section, to an indictment for a misdemeanour, and the keeper of an asylum who receives a lunatic upon a certificate not signed in accordance with it, is also guilty of a misdemeanour. In the case mentioned by Dr. Willis, the Commissioners of Lunacy referred the illegal certificates of the medical men to their solicitor, in order that proceedings might be taken against them. The filling up of these certificates in a proper and legal manner is of more importance than may at first sight appear; and from a case which has just been decided by the judges of the Queen's Bench, we are induced to make some additional remarks on the subject.

---

[*] Vol. xxxvi. p. 1430.

In reading the clause, a medical man may be induced to ask, "What fact or facts are to be specified?" There may be a general impression that the party is insane, from acts and conversation as described by others, but no "fact" strikingly indicative of insanity may appear to the examiner. If the practitioner has the conviction that the party is insane, this must, of course, arise from some circumstances which he has either heard of or witnessed in the conduct or conversation of the individual. So far as a due regard to decency and propriety will permit, these circumstances should be stated in writing: but the decision just made by the Court of Queen's Bench, has placed a very open meaning upon this part of the clause, and has given such a proper degree of liberty with respect to the statement of "facts" from which a medical opinion of insanity may be formed, that no legal difficulty is likely to occur again on the subject. A medical man must be wilfully blind or perversely negligent in the performance of his duty, to expose himself or the keeper of a lunatic asylum to a prosecution for a misdemeanour.

COURT OF QUEEN'S BENCH, WESTMINSTER,

November 17.

In the matter of Martha Elizabeth Rhoda Shuttleworth, a lunatic.

In this case an application had been made on Monday to Mr. Justice Patteson, in the Bail Court, for a rule directing the discharge of the above-mentioned lunatic, who is at present confined in a licensed asylum, called York House, Battersea, superintended by Dr. Millingen. A *habeas corpus* had been issued to Dr. Millingen commanding him to bring up the body of the individual in question, and he had made a return stating that he retained her in custody as a dangerous lunatic, under the authority of the 8th and 9th Victoria, c. 100, and by virtue of the order and certificates which he had received from the proper parties in that behalf. There was no traverse of the return, or any attempt made, by any sort of evidence or other course of proceeding, to prove or insinuate that the lady was not insane*. The whole ground of the application was, that the order and certificates which Dr. Millingen had "returned" as his justification for keeping her in custody were *technically defective and informal*, inasmuch as some of the blanks in the forms of those documents, as given by the statute, were not filled up, whilst the printed form itself was in a slight particular altered by the omission of one or two words, and the substitution of a few others. Even the technical objections had no practical importance in this particular case, as an order and certificate free from the errors alleged in the present instance, were in readiness to be used in procuring the immediate recommitment of the lunatic to custody, in the event of the Court being of opinion that the documents which had been employed for that purpose were essentially defective, and ordering the lunatic to be discharged.

Mr. PARRY moved before Mr. Justice Patteson, that the lady should be discharged, on the ground that the return was insufficient. He did not now intend to raise any question as to the fact of the lady being of unsound mind, but he should confine himself to the position that the order and the certificates were altogether insufficient and illegal. These documents had been given under the 8th and 9th Victoria, c. 100. As the provisions in that act were more restrictive of the liberties of the subject than those of any other statute, he submitted that they must be looked at with great strictness and care, in order to show that a party was not in illegal custody. In the first place, as to the order. It did not appear that Mr. Rowlett was related to this lady, or that he had ever seen her, but merely that he was the clergyman of the parish in which she resided. No doubt a stranger might sign such an order, but then the circumstances required to be looked at with greater partiality. There were about 10 questions propounded in the order by the statute; but this gentleman had omitted to answer the greater portion of them; he had not stated her age, her religious persuasion, whether she was dangerous, whether she had before been confined, &c.; therefore the order was bad; still, if his Lordship should be of opinion that the order would do, he should then submit that the certificates of the two medical gentlemen were insufficient. *By the statute these gentlemen were bound to state the facts upon which they grounded their opinion that the party was insane.* Now, in these circumstances there was not any statement of any facts which could warrant any reasonable person in supposing that this person was insane. One of those certificates stated that she laboured under delusions of various kinds, and was dirty and indecent in the extreme; but from this statement his Lordship could not infer anything. In the other certificate, which was a printed form, the surgeon had struck out the words "from the following facts," and then added, "*I have formed my opinion from the conversation I have this day had with her.*" This, he submitted, was the result only of facts, and not the facts themselves, and, therefore, these documents being insufficient, the lady must be discharged.

---

* A motion for another habeas corpus has been since made on the ground that the party is not insane.

Mr. Justice **Patteson** said, the party hould have stated that those facts were unknown to him, and should not have omitted answering them altogether. As to the cerificate, how could it be argued that saying e formed his opinion from a conversation e had had with her was the statement of a act; the judgment might have been formed pon very sufficient facts, but the surgeon ad not condescended to state what those acts were.

The case having been reserved for the udgment of the whole Court,

Lord **Denman**, without any hesitation, aid, that this Court was of opinion that here was no other difficulty in the case xcept what arose from the fact that Mr. ustice Patteson had entertained some doubt pon the subject. It was perfectly clear hat there was no sufficient security either the public, or the unhappy class in uestion, that their affairs could be benecially conducted, except by a Parliamenry administration peculiar to themselves. very regulation adopted with respect to em was, in fact, as exceptional as their wn condition. Formerly, under pretence insanity, outrages of the grossest characr were committed against lunatics, real or pposed, by persons having an interest in eir property. At last several Acts of rliament were passed, framed with great re and tenderness, for the prevention of ud, and the protection of those unhappy rsons against the designs of such persons as might have an interest in procuring or prolonging their confinement, as well as to prevent them from being dangerous to others or themselves. As the result of these provisions, no person could be transferred to the custody of the keeper of a licensed asylum except under the authority of an order to be procured for that purpose in the manner provided by the act. No particular character was necessary to enable an individual to procure such an order, because it was intended by the Legislature that the right to issue it was to be founded upon the opportunities which he possessed of observing whether the person whom it was proposed to place under restraint, was a fit object for such a proceeding or not. In the present case nothing could have been more proper than the conduct of Mr. Rowlett, the clergyman, who had interposed in a manner highly befitting his character and situation for the protection of the lunatic and the public. To proceed to the more particular consideration of the motion actually before the Court; it appeared that the 45th section of the 8th and 9th of Victoria, c. 100, which was worded in a peculiar manner, provided that no person, not a pauper, should be transmitted to any licensed establishment for the reception of insane persons, except under an order, which was to state certain particulars therein described. The first question, therefore, to be decided was, *whether the order in the present case contained all the particulars required by the statute. He* (Lord Denman) *was of opinion that it did. Some of the particulars were stated with as much clearness as the nature of the case admitted, and a very satisfactory excuse was given for the absence of a fuller statement of other particulars.* It was objected that the religious persuasion of the party had not been stated. But it was alleged that the religious persuasion, if any, could not be ascertained in the actual condition of the lunatic, and the same observation might be made as to the alleged absence of the particulars of her previous history, which could not be ascertained in consequence of the condition of the lunatic and of her disinclination to communicate the information required. The provisions of the 46th section of the act which related to the certificate were different from those of the 45th, and it was impossible not to see that they were of what was called a directory character; a strict compliance with which was excused by the impossibility of obeying them precisely in the actual circumstances of the case. The parties called upon to act under that section were known to the law, which had confidence in them, as persons peculiarly skilful in subjects of that nature. The certificate drawn under this section stated, that the lunatic *laboured under a variety of delusions, and that she was dirty and indecent in the extreme, and it was contended that this statement was not so much a fact in itself, as a conclusion drawn by the medical gentleman from other facts which he ought to have stated upon the face of the certificate itself.* But he (Lord Denman) thought that it *would be monstrous to have those delusions all stated upon the document.* Many of them were indecent, and many were blasphemous; and the Legislature had referred it to the discretion of a competent medical authority to decide upon the value of such facts in virtue of the authority conferred upon them by the act. But *the particulars which were stated in the certificate were*, in the opinion of the Court, *sufficient* to justify the conclusion. The allegation that the person in question *was dirty and indecent in the extreme* was, in the opinion of the Court, of itself sufficient *primâ facie* to justify the imputation of insanity, even if the certificate did not state, as it did, that the patient *was under a variety of delusions. The second certificate was not so formal as the first, and it could not be denied that it would have been better if it had been so*; but, if it was *substantially* equivalent to the form given by the act, this Court ought to be satisfied, especially when regard was had to the parties from whom the certificate had proceeded. It had been objected that the party certifying the insanity had stated his opinion to be *founded upon a conversation* which he had had with the lady; whereas he ought to have stated some facts as the foundation of that conclusion, it being contended that a conversation was not a "fact" within the meaning of the statute. He (Lord Denman) was, however, of a different opinion, and considered the *certificate to be sufficient* upon this point. It ought not to be forgotten in any part of this case that neither the certificate nor any other part of these proceedings was final and conclusive, and that the real purpose which they were intended to serve was, to point out the best sources of information, and put matters into a train for a more effectual inquiry. For these reasons he (Lord Denman) was of opinion that the certificate and order were good; but, even if they were not, and the Court, having arrived at that conclusion, were also convinced that the party in question was a dangerous lunatic, the Court would be betraying its duty as judges, and even as individuals, if they should, in such circumstances, order the release of a person so circumstanced, and whose discharge from custody might produce great evils to society and to the unhappy individual herself. It had been suggested that the lunatic, after being discharged, might be immediately re-committed to custody; but it was surely a more proper course of proceeding to abstain from what might lead to a disturbance of the public peace, and would probably be even injurious to the lunatic herself. It would be an abuse not only of the substance, but of the very name, of liberty, to confer it upon the person in question under circumstances which must render it a curse both to herself and others. The Court reposed full confidence in the persons to whom her custody was confided by law: they would restore her to freedom whenever such restoration would be consistent with her own security and comfort. The present motion for her discharge would therefore be refused.

Mr. Justice Coleridge, Mr. Justice Wightman, and Mr. Justice Erle, concurred in the judgment of Lord Denman.

It must be regarded as a somewhat novel proceeding on the part of an individual (a medical man, we believe, in this instance) to attempt by a writ of *habeas corpus* to procure the liberation, on a mere technicality, of a person admitted to be insane, and unfit as well as unsafe for herself and the public to be at large; but the case has been attended with the important result to medical practitioners, of defining the principles by which they are to be guided in signing certificates for the custody of lunatics. The profession are, therefore, much indebted to Dr. Millingen for causing this case, which must have led to considerable trouble and expense on his part, to be brought in a formal manner before a Court of Law. Had he so pleased, he might have set the lunatic at liberty, and procured immediately other certificates containing all those particulars, for the omission of which the writ of *habeas corpus* had been issued; and this is what, doubtless, most keepers of lunatic asylums would have done, in order to avoid trouble and litigation. The question regarding a legal and reasonable interpretation of the 46th clause of the Lunacy Act would then have remained unsettled; and medical men, as well as keepers of asylums, might have been liable at all times to harassing proceedings from a misunderstanding of the clause. The Court of Queen's Bench have, however, by their decision in this case, distinctly laid down the rule that a medical opinion of insanity may be founded upon a *conversation* with an alleged lunatic, and that a statement of this, as the ground of an opinion, would be sufficient for a legal compliance with the meaning of the act; but the Court appear to regard a certificate of this kind as *substantially*, although not literally, equivalent to the form required by the act. Under these circumstances it would be advisable, whenever it is possible, that a medical practitioner should make, in addition, a written statement of any facts, including habit, conversation, or demeanour, which may be considered indicative of insanity.

A DEPUTATION from the Health of Towns' Association had an interview on Friday last with Sir G. Grey, Secretary of State for the Home Department, in order to urge upon the Government the necessity of adopting general legislative measures in the next session of Parliament for the sanitary improvement of the towns and populous districts of the United Kingdom. The late Government had proposed to restrict the Health of Towns' Bill to the whole of England and Wales, except London. Scotland and Ireland were completely excluded from its operation. The deputation strongly urged the propriety of these countries being included in any future measure. It was proposed, if required, to produce additional evidence of the strong necessity which existed for immediate legislative interference; but

Sir G. GREY remarked that it would be quite unnecessary to state any additional facts. The members of the Government were fully alive to the importance of the subject, and it had received their serious attention for some time. They had had several meetings thereon, and Lord Morpeth's attention had been more especially devoted to the matter, with the view to the preparation of general measures to be brought into Parliament early in the ensuing session. It was not to be supposed that because the metropolis, and Scotland and Ireland, were omitted from the general measure proposed by Lord Lincoln, that they were intended to be passed over, but that the different cases requiring different machinery, they should be the subject of separate acts.

The deputation next called attention to the disgraceful state of the graveyards of the metropolis, upon which Lord Morpeth stated his opinion, that this should not be included in a general sanitary measure, but should be made a subject of special legislation.

On the whole, it will be perceived from the result of this interview, it is highly probable that the next session of Parliament will not be allowed to pass without some experiment on sanitary legislation.

WE are glad to perceive that medical practitioners are endeavouring to carry out the provisions of the "Contagious Diseases Prevention Act" in a right spirit, and to put down nuisances in all quarters. Scarcely a week passes without informations being laid against nuisance-mongers in some of the metropolitan districts. These gentlemen, who appear to consider that they have acquired a vested right in effluvia which poison their neighbours, are beginning to look out for counter-evidence, so that it is likely, when such informations are laid, to become a question, "What is a nuisance under the act?" Fortunately, the law is, on the whole, very explicit; but, we observe, from a case reported in the daily journals, that doubts, based on scientific chemical views, have already arisen concerning the meaning of the word "nuisance." Our space will not allow us to comment on the proceedings this week; but as it is of importance, on the one hand, that the public health should not suffer from what are really nuisances, and, on the other, that private individuals should not be persecuted by an overstrained interpretation of the clauses of a most useful act, we shall take an early opportunity of returning to the subject.

Reviews.

Manual of Operative Surgery; based on Normal and Pathological Anatomy. By J. F. MALGAIGNE, *Professor* Agrégé de la Faculté de Médecine de Paris. Translated from the French by FREDERICK BRITTAIN, A.B. M.D. M.R.C.S.L. Sm. 8vo. pp. 586. Renshaw: London. 1846.

M. MALGAIGNE is well known to English surgeons as the author of a good work on anatomy, and as the illustrator of several important questions in practical surgery. The work before us is highly creditable to the author's discrimination and research; and, although we are not generally inclined to recommend students to devote any large portion of their time to the perusal of treatises on operative surgery, believing that all the most substantial knowledge of this subject must be acquired at the bed-side and in the operating theatre, we cannot refrain from thanking Dr. Brittain for placing so well compiled a work within the reach of those men who wish to add to their practical knowledge a more extensive acquaintance with the modes of operating which have been proposed by various authorities.

We have marked for extract a few details of operations, which afford good examples of the style of the work, and which may prove novel to many of our readers:—

Operation for evacuating the serum in œdematous angina of the larynx.

"*Surgical anatomy.*—You must recollect that the larynx, in addition to its superior orifice, offers two constrictions: the first of which we have named the *superior glottis*; the second *the inferior glottis*, or glottis properly so called. It is between these two constrictions that we find the ventricles of the larynx. That which is called *laryngeal angina* and *œdema of the glottis* is not situated on the inferior glottis: it occupies the mucous folds of the superior glottis or mouth of the larynx. You can pass a bistoury to these two parts without inconvenience, whilst, if you injured the glottis the voice would become hoarse, or perhaps lost, for life.

"*Operation* (*Lisfranc*).—A slightly curved bistoury is used; its blade, long and narrow, is fixed in the handle, and guarded with lint, to within one line of its point. The patient is placed with his head on a pillow or against the breast of an assistant, and his mouth as wide open as possible, or even kept open with a cork. The operator passes his left index and middle fingers into the mouth through the isthmus of the fauces, and reaches the swelling formed by the œdema; then, holding the bistoury as a pen, he passes it flat along his fingers to the part. When he has reached the larynx, its edge is turned upwards and forwards, and its handle being elevated or lowered as gentle pressure is made with its point, the swelling is thus scarified. Two or three incisions suffice, with a little compression, to evacuate the serum. You may make more if you like, only try and make them as far apart as possible, to avoid the effects of an inflammation concentrated on one point." (p. 373).

We have no doubt that the above operation might be facilitated by the employment of a modification of Dr. Warden's instrument for dilating the fauces. It appears to us to be far more feasible in theory than in practice to retain two fingers for any time upon the rima of a person suffocating from œdema of the glottis.

"*New proceeding for securing the common carotid artery at the upper part.*—The external incision, two or two inches and a half long, should be so disposed that its middle fall on a level with the bifurcation of the artery, variable in the two sexes, as we have said—(the artery bifurcates at a variable height; but generally, in the male, on a level with the superior edge; in the female, opposite the middle of the thyroid cartilage). In this point, the artery, disengaged from the tracheal muscles, is exactly on the internal side of the sterno-mastoid—one essential guide. If necessary we have a second in the larynx, on the inner side of the vessel.

l, and his head, inclined to the healthy ixed by assistants, the surgeon makes ision along the internal edge of the -mastoid, or rather some lines out- or fear of missing the muscle. If it ot make a very apparent projection, the direction of a line drawn from ternal extremity of the clavicle to the id process. The first incision should the skin and platysma, so as to e the sheath of the muscle; the second es the muscle near its external border. th this border is the posterior layer of ascular sheath, which also forms the of the vessels. Divide it cautiously, ou fall on the two vessels,—the artery the vein outside. Isolate them as

This method, in addition to its r facility, has the following advantages: e less exposed to meet the anterior r vein; and we avoid the loop of the lossal nerve, which passes on the l about an inch below its bifurcation; lastly, we have a more superficial l, without sinuosities."

Tew proceeding for securing the pri- carotid artery at its superior por- -According to what has been said, the -mastoid is no longer the satellite e to the artery in this situation, but erno-thyroid, which is a little over- l outside by the sterno-hyoid. The a is always the last guiding mark. terno-hyoid should then be first largely on its outside, raised, and partly cut , if necessary, and the sterno-thyroid ed. The artery is to be sought for its external edge.

he patient should lie down, with his hrown back, but without any rotation right or left. I make an incision two long, commencing from one-third of h above the sterno-clavicular articula- and in the direction of a line passing m this articulation, and rising towards ymphysis of the chin. The first cut l expose the cervical fascia; the second it, and expose the fibres of the l portion of the sterno-mastoideus; ird divides this fasciculus in the direc- f the external wound; then the two al muscles appear enveloped in a on cellular sheath, and separated only lamellated tissue, without any con- ce. The anterior layer of this sheath ided, which exposes the sterno-hyoid. extends far outwards, cut across its al portion; if not, raise it inwards the sterno-thyroid. The posterior of their sheath is confounded with heath of the vessels. It is opened as s possible to the trachea, on the outer f which we find the artery, which is d in the way we have said. If, in the subject, the *engorgement of parts,* the infiltration of the cellular tissue, or any other cause, leaves any doubt as to the situation of the artery, we have a last guide in the carotid tubercle, pointed out by M. Chassignac. This tubercle is formed by the projection of the anterior branch of the transverse process of the sixth cervical vertebra, which is much more distinct than the others, and is found two inches above the clavicle, under the internal edge of the sterno-mastoid. It is easily felt after the incision of the first layers; it corresponds in front and a little inside to the carotid artery. The indication is so precise that, in the subject, by holding a finger on the tubercle, we may plunge the bistoury directly into the artery, without any previous incision of the integuments. It is only essential that the neck be retained absolutely straight, the least rotation sufficing to modify the relations." (pp. 139-40).

"*New method of tying the lingual artery.*—The lingual artery runs parallel to the great cornu of the os hyoides. It suddenly changes its direction in a precise spot, easily recognised when the skin is incised, viz. opposite a small osseous projection, neglected or not noticed by authors, which occupies the upper border of the great cornu of the os hyoides, one or two lines from the lesser cornu. The greater cornu being first recognised, an incision about an inch long, comprising the skin and platysma, must be made two lines above and parallel to it. We thus fall on the inferior border of the submaxillary gland—our first guiding point. This gland being a little pushed up, we find beneath it the tendon of the digastric, remarkable for its pearly brilliancy—second guiding point. Half a line above is a whitish cord, sometimes concealed by some fibres of the stylo-hyoid. Free it, if necessary, with the point of the bistoury: it is the hypoglossal nerve. This third point well recognised, at one line below it divide transversely the hypoglossus muscle, and you fall directly on the artery, which is not accompanied by any vein or nerve. The facial vein is more superficial, and crosses the incision obliquely from without inwards, and from below upwards. The skin, on this account, and the platysma, must be cautiously cut, and the vein, which is tolerably large, being seen, must be pushed outwards." (pp. 140-1).

It appears that, in some women, the os hyoides rises so high, and the submaxillary gland so overlaps its cornu, that the artery is placed too deep to render the operation of securing it in this situation feasible.

The work contains a few statements and descriptions which will not be readily accepted by all practical men, especially by English surgeons, as the following:—

> "In my opinion there is only one way of rendering perineal lithotomy less dangerous; at least, as regards the operation itself: it consists in following a precept entirely opposed to that which is generally laid down; viz. *in dividing the prostate freely on one side beyond its limits*, cutting the neck of the bladder and the cellular tissue, if the size of the stone necessitates it: in a word, in making so free a passage for the stone that the wound may remain an incision, and not be complicated by contusions and lacerations." (pp. 529-30).

The translator very properly hesitates to allow this opinion to pass without quoting the views of other operators on the subject. Mr. S. Cooper appears to be the only writer who has expressly stated that the prostatic incision need not be limited by the circumference of the gland; while many other operators, among whom M. Velpeau, Scarpa, Sir B. Brodie, Mr. B. Cooper, and Mr. Liston, may be mentioned, have dwelt strongly upon the dangerous consequences which are liable to result from carrying the incision beyond the boundaries of the prostate.

Dr. Brittain has performed his task of translator and editor with much judgment. The descriptions are perfectly clear and explicit, and the author's occasional omissions of important operations proposed by English surgeons, —a species of information which seldom reaches our Parisian brethren until it has been made public for some ten or fifteen years,—are judiciously supplied in brief notes. Altogether the work is one which well deserves a place in every surgical library.

Urinary Deposits; their Diagnosis, Pathology, and Therapeutical Indications. By GOLDING BIRD, A.M. M.D. &c. 2nd Edition. 8vo. pp. 339. Churchill: London. 1846.

THE publication of a second edition of Dr. Bird's treatise at the expiration of two years from the period at which the first appeared, is a proof, alike creditable to the author and to his readers, of the zeal and success with which scientific research is at present pursued, and of the interest and encouragement with which the results of such inquiries are welcomed by the great body of the profession. Among the
many drawbacks which nc
the publication of scientif
there certainly arises one
substantial advantage; nam
in the present day no really
and tangible fact, or series of
tions which has been submit
and clearly to the notice of
fession, can ever fail to att
attention, and to gain for it
the praise to which his labou
talent entitle him. Formerl
on abstruse subjects gained ac
to the few, and were often c
to oblivion by the inattentio
judice of the limited number
who were at all capable of app
their contents. Now, every
sessing any ordinary claims to
is submitted to the judgment
sands, each individual of whom
or less capable of appreci
merits and determining its
Dr. Bird's treatise on urinary
has most certainly well me
interest and favour with wh
been received by the profes
we have great pleasure in
the appearance of a new an
edition.

Handbook of Human Anat
neral, Special, and Topo
Translated from the origina
of DR. ALFRED VON BI
adapted to the use of the Eng
dent, by JOHN BIRKETT, F.
and Demonstrator of An
Guy's Hospital. Small 8vo
London: Longman and Co

A SHORT notice of the work
we have here a translation wa
in the 37th volume of this
Mr. Birkett has, by the publi
this Handbook, placed within
of English students a useful el
treatise, which, while it may
a dissector's manual, has the
advantage of affording a co
scription of the general anato
body in conjunction with
prominent facts which hav
years been established resp
constituents and structural
ments of the animal tissues.

The construction of this
excellent. The matter is
ranged, the index copious,
descriptions, while they are

---

* Page 470.

n the whole, clear, ample, and cor-
. The views respecting the struc-
l anatomy of a few of the tissues
not altogether agree with those
rtained by the latest observers.
s, however, is scarcely a fault, as
s, of course, necessary that new
s should undergo careful investiga-
before they are recommended to
student as recognised and esta-
ned principles. We think that the
slator would have done well to
e omitted a very large proportion
ne Latin synonyms. Nearly the
le of these sesquepedalian terms
now discarded from English me-
. literature, although still employed
many foreign writers of the old
ol.

ne following extract from the first
on on General Anatomy will afford
r idea of the manner in which the
or has stated the leading facts of
science, as well as of the style of
ranslator.

> *Metamorphosis of cells.*—As the cells
> hrough various stages of development,
> also present different circumstances in
> t to their shape, position, contents,
> hemical relations. In some tissues
> maintain their independence, at most
> upon another, and becoming thereby
> ed, or elongated and pointed (*e. g.* in
> anular pigment, in the blood, in the
> lar tunic of the intestines). Others
> a size of more importance (fat cells),
> ninish in size (the lymph globules, if
> ecome changed into blood corpuscles);
> ose after a time their nucleus (the
> e blood corpuscles); their parietes
> e thickened (cartilage cells).
>
> n most tissues the cells blend together
> alesce. We find remaining—
>
> The cavities of the cells unaltered,
> r thickened walls blended together (in
> artilage and osseous tissue) or their
> s impinging one upon another are
> through, so that continuous tubes
> renal and seminal tubuli, perhaps also
> ries); or,
>
> The cavities disappearing, their
> s lying flat together, so that the cells
> solid laminæ, which appear to be
> out either in a membranous or a
> form, according to the position.
>
> ere belongs also the coalescing of
> x (endogenous) cells which are trans-
> into the primitive fibres of the nerves,
> ne primitive bundles of the animal
> ar tissue.
>
> The nuclei of the cells elongate,
> e, and thus form the 'nucleus fibres,'
> much stronger than the cell fibres, upon which they are found, are distinguished from them also by their insolubility in acetic acid. They are either rectilinear, spinal, or like a tendril, according to the position of the nucleus in the cell.
>
> "As the cells are dislodged from their situation, or become again formed into the homogeneous mass of cytoblastema out of which they arose, intervals are formed which are filled with fluids or air: these are the *intercellular passages.* They are circumscribed by layers of cells, and appear, after the metamorphosis of the cells into fibres, as canals and cavities (closed and open vascular cavities lined with mucous membrane), with membranous or fleshy parietes. It is, moreover, a matter of indifference whether the structureless matter which also serves as a uniting medium be solid, as in the bones, or fluid, as in the blood," (pp. 6, 7.)

Mr. Birkett has placed at the head of each division of the work copious references to those monographs in the English language which contain original observations upon the subjects described in the ensuing sections, and has occasionally supplied deficiencies which occur in the original work. He has certainly performed a difficult task in a very able and judicious manner, and we can recommend this Handbook as a useful and systematic guide to students of anatomy.

A Manual of Materia Medica and Therapeutics: including the Preparations of the Pharmacopœias of Edinburgh and Dublin. By J. F. Royle, M.D. F.R.S.; Professor of Materia Medica and Therapeutics, King's College. 8vo. pp. 716. London: Churchill. 1846.

In the volume before us, we have a continuation of the series of useful and practical Manuals published by Mr. Churchill. Unlike some brethren of the craft, we do not object to the use of the term "Manual," because we prefer judging of a book from its contents rather than from its size and name; although there can be no doubt that each volume of this series really constitutes a most elaborate treatise on the science to which it is devoted. "Principles," "Outlines," "Elements," "Systems," have been long since exhausted by medical writers; and as it is pretty generally understood that a Manual is not now the light sketchy synopsis of a subject which it was in days of yore, there can, we think, be no objection to the employment of the term.

Dr. Royle's Manual of Materia Medica, while it has the convenience of being in a portable form, contains as much matter as would fill two or three volumes in large type. It is, therefore, in this respect well adapted for the use of the class to whom it is especially addressed, namely, medical students, who in general prefer the *multum in parvo* volume to the ponderous treatise: and so long as the matter is good, well selected, and practical, this preference is just and reasonable.

The work commences with some introductory remarks on the mechanical operations of pharmacy, and a brief sketch of the principles of pharmaceutical chemistry. The author divides Materia Medica into three great sections — mineral, vegetable, and animal. The greater part of the volume is occupied by the Vegetable division of the subject, in which Dr. Royle follows the arrangement of De Candolle, giving at the same time in many instances Dr. Lindley's English names of the Natural Families. The Animal division is short.

In the Mineral department, the author successively describes the properties of each elementary substance and the compounds which it forms, whether chemical or pharmaceutical: its mode of preparation,—tests for its purity,—its action and uses. To this general history are attached the special pharmaceutical formulæ into which the element or its compounds enter, according to the English, Irish, and Scotch Pharmacopœias. With each body the symbols and equivalents (on the hydrogen scale) are given,—the synonymes in French and German, and a short preliminary account of the etymology of the name, and the natural history of the substance.

The Vegetable materia medica is dealt with in a similar way; but the botanical characters of plants are more fully described, and this part of the work is illustrated by a large number of well-executed wood engravings.

The great difficulty which writers on materia medica have to contend with is, that of not encroaching too much on chemistry, botany, zoology, and other collateral sciences Just so much of each subject should be selected, as will convey to the reader a idea of the natural characters, properties, chemical qualities, mode of action of medicines. Royle appears to us to have been successful in mastering this diffi the chemist certainly cannot com of an undue use of the principl his science; and if the botanist with some show of reason object appropriation of the harsh and monious terms lately introduced the science, it must be remem that botany is now constituted a of medical study, in reference to there is no easily accessible or pendious work. A medical student expected to make himself acquaint with the nature of "subulate ments," "versatile anthers," and " bracteate pedicels;" and Dr. has here contrived to place before a very fair outline of the princip and nomenclature of medical botany;

In looking through this section the work, we observe that the auth philological knowledge has en him to give some new and cu derivations to the names of sub in common use; and his practi knowledge is shown in many inte ing details relative to the history and properties of that class of vegetable substances which derived from our possessions in East.

As specimens of the manner which Dr. Royle treats his subject, subjoin two extracts in reference medicines which have lately attr some notice in the profession. *Be rine* it is well known is the alkali Nectandra Rodiei, or the wood of Greenheart tree, called Bebeeru by Indians of Demerara. It is impo into this country for shipbuilding, large in size, heavy, hard, takes a polish, but is apt to split, is of different tints of olive varying from pale to dark.

> "It is a new species of the laur longing to the genus *Nectandra*, *N. Rodiei*, in compliment to Mr. late a surgeon in the R.N., who in 1834, directed attention to its able febrifuge properties, and indicated presence of an alkali in the bark of this Dr. Warburg also prepared what he 'vegetable fever drops' from some this tree, which he distributed exten and which were favourably reported

medical officers. Dr. Maclagan, in
843, read before the Royal Society
burgh an able paper on the Bebeera
ts chemical composition, and its
[medicinal ?] uses; and the na-
the alkali Bebeerine has been fur-
ucidated by himself and Professor

e bark occurs in large flat pieces, is
four lines in thickness, heavy, and
rough fibrous fracture, of a dark
on brown colour, rather smooth
but covered externally by a splinter-
yish brown epidermis. It has little
roma, but a strong persistent bitter
ith considerable astringency. These
ies depend on an alkali which has
lled Bebeerine," (p. 546).

ording to Dr. Maclagan's ana-
this alkali constitutes 2·56 per
f the bark, and 2·2 per cent. of
ds. Dr. Royle then proceeds to
e the method of extracting
kali, which is a resinous-looking
talline substance, of a pale yel-
lour.

is very soluble in alcohol, less so in
nd very sparingly in water. Heated,
, and the heat being continued it
up, giving off vapours of a strong
r odour, and burning without residue.
ed to the action of oxidizing agents,
s, with bichromate of potash and
ic acid, a black, and with nitric acid
w resin. It forms with acids salts
are all uncrystallizable: with per-
e of gold, mercury, copper, iron, and
m, it gives precipitates which are
to a certain extent in hot water and
, but which, on the solution cooling,
deposited from it in a crystalline
Messrs. Maclagan and Tilley found
e composed of oxygen* (carbon ?)
hydrogen 6·49, nitrogen 4·75, oxygen
=100, and that the formula is C_{35}
$_2$ O_5. Dr. M. obtained some be-
from Warburg's fever drops. The
observe it as remarkable, that it
be isomeric with morphia, which acts
re narcotic. * * *Action: Uses.*—
antiperiodic, febrifuge. From the
l experiments of Mr. Rodie, and those
ith Warburg's fever drops, there was
loubt of the Bebeera bark being a
ul antiperiodic. These have been
ed by the experiments of Dr. Mac-
and of Dr. Watt, of George Town,
ara, with the sulphate of Bebeerine,
Dr. Anderson and others at Kamptee,
n the ague and remittent fever of
by Drs. Bennett and Simpson in periodic neuralgia. Dr. Christison has stated to the author that the sulphate of Bebeerine has come into general use in Edinburgh as a tonic and stomachic, and also as an antiperiodic, in the very same diseases, and for the very same purposes, as sulphate of quinine, and that it appears not so apt to occasion headache. He had employed it in a very severe case of tic douloureux, and with complete success, exactly as if sulphate of quinine had been used. It is given in two or three grain pills every hour, or three or four times a day, according to the case; so that ℈j. or so may be given before the accession of a paroxysm: or it may be given in gr. x. doses morning and evening. Considerable improvement in the manufacture has been made by Mr. M'Farlane, of Edinburgh, who now prepares it in considerable quantities for medical use as sulphate of Bebeerine." (p. 547.)

Matico is a name applied in South America and Mexico to the leaves of several very different plants. According to Dr. Royle, it is certain that what has been of late years imported here, and of which he has received specimens from Dr. Jeffreys, of Liverpool, are the leaves, with portions of the stem and flowering spikes, of a species of piper supposed to be *piper angustifolia (angustifolium ?)*, but which is now named *Artanthe elongata.*

"The matico was first brought into notice by Dr. Jeffreys as a styptic (Lancet, Jan. 7, 1839) in leech-bites and wounds of arteries, and has been found efficacious in many obstinate cases of bleeding—as from the nostrils, and even from the tongue. Its under surface, which is reticulated with veins, and covered with hairs, should be applied, as it is probably on this structure that its utility depends. Its infusion and tincture have also been recommended internally in affections of the urinary organs, on which, by its stimulant action, combined with a little astringency, it would appear to produce a salutary effect, as cubebs are frequently known to do. Its properties, by the analysis of Mr. Morson, appear to depend on its resin and volatile oil, its aqueous extract having only a slightly bitter and astringent taste. It has also been prescribed in discharges of blood from the urethra and rectum, as well as in uterine hæmorrhage, and has been used as an injection in leucorrhœa, and as an external application to (in ?) hæmorrhoidal affections, both as an ointment and as a lotion by Mr. Young and Dr. O'Ferral. The infusion may be prepared with Matico ʒiv. increased ℥j. to Aquæ Oj., and given in doses of f℥iss.; and the tincture (Matico ℥iij. to Proof Spirit Oj.) to be

---

ygen appears to have been here inadver-
ut for carbon. We do not find the error
the corrigenda.—Rev.

given in doses of fʒss. to fʒj. two or three times a day." p. 564.

Dr. Royle will find, by referring to our 36th volume, page 942, that it has also been successfully employed by Mr. Stickings in hæmatemesis. The Animal materia medica calls for no particular notice.

The volume is concluded with an excellent therapeutical arrangement of the Materia Medica, in which, under the general action of remedies, the author refers the reader to those parts of the volume in which the medicinal preparations recommended, are fully described. This is a very useful practical summary. A most copious Latin and English index is attached, so that reference to any particular article or subject may be easily made.

Our readers will judge, from the remarks which we have already made, that we think highly of this Manual. The subject is well treated, the matter practical, and well arranged; and we therefore do not hesitate to recommend it as a most useful volume to the student and practitioner. It is a good specimen of typography, and the engravings are well executed.

ANHYDROUS ALCOHOL.

M. Casoria proposes to employ perfectly dry sulphate of copper to render alcohol anhydrous, and also to employ it as a test for ascertaining that it is perfectly free from water. For these purposes he saturates alcohol of 83° by the instrument of Gay-Lussac, with fused chloride of calcium: he distilled one-third of the liquid, and to about 7500 grains he added a small quantity of the anhydrous sulphate, and kept the mixture in a well closed bottle, which was shaken occasionally. The salt, by combining with the water of the alcohol, resumes its blue colour, and fresh portions of the salt are to be added, till the blue colour ceases to be produced: the alcohol, after distillation, may then be considered anhydrous.

To determine the absence of water from alcohol, a small quantity of dry sulphate of copper is to be put into a glass tube, and the alcohol poured upon it: if no colour be generated, the alcohol may be regarded as anhydrous. In performing this experiment, it is requisite to keep the tube closed, as the moisture of the atmosphere would interfere with the accuracy of the result.—*Journ. de Chim. Méd.* Juillet 1846; and *Lond. aud Edinb. Phil. Mag.* Nov. 1846.

Proceedings of Societies.

WESTMINSTER MEDICAL SOCI

Saturday, Nov. 14th, 1846.

Mr. Hancock, President.

Mr. Marshall related the following case of

Sudden Death.

The subject of the case was a woman [illegible] three years of age, who had not enjoyed a state of good health for some years. She was rather of spare habit of body; her countenance sallow and unhealthy; and from her general appearance she would have passed for a woman of seventy. She was subject to cough, and embarrassment of breathing. She was never troubled with sickness or vomiting. She made water in small quantity, but rather frequently. She would occasionally complain, "that her head was too heavy for the rest of her body." Her habits, until within the last twelve months, were regular and temperate; but latterly she had been addicted to the drinking of ardent spirits.

About three months ago I attended her for fracture of the radius and ulna, which seemed to me to have been produced by a less degree of violence than is common in most cases of fracture. Her general ailments had rather increased for the last few weeks. On the morning of the day on which she died, she took her breakfast much as usual. In the afternoon she refused her dinner, but made no particular complaint. About six in the evening she complained of slight chilliness, and requested a little hot gin-and-water, which was given to her, and in a quarter of an hour afterwards she expired without a struggle.

The body was examined sixteen hours after death, in which I was kindly assisted by my friend, Dr. Snow. The body generally was thin and emaciated, with slight œdema of the lower extremities. There was a considerable curvature forwards of the tibia, which, although not examined, evidently depended upon an enlargement of the substance of the bone, occupying its middle third, and situated about an inch above the normal line of the bone. On making an incision through the skin and cellular tissue, the blood was found to be extremely fluid, and flowed freely from the smaller veins. The muscles generally were in a softened condition. The pulmonary artery and aorta were torn by the fingers with the greatest ease. On opening the chest, the right lung was found adherent to the pleura, but could be separated by the structure of the lungs was otherwise thy; but was dark coloured, in conse- nce of containing a large quantity of fluid d. The trachea was in a normal state, about an inch below its bifurcation into t and left bronchi, the tubes were found inctly ossified, and about twice the thick- of common writing paper, and giving on being struck with the handle of the pel, a feeling and sound of considerable stance. The ossification extended almost e apices of both lungs, through the various sions of the bronchial tubes, rendering it ewhat difficult to cut through the lung. re was about six drachms of clear serum he pericardium; the heart was rather er than natural; the left ventricle was con- ed, but the other cavities were filled with k fluid blood; the tendinous cords of the al valve were much ossified, especially at attachment to the substance of the t; the valve opened sufficiently, but was pable of closing accurately. The aortic e was somewhat thickened and roughened small calcareous deposits; but it was ble of closing the orifice completely. substance of the heart seemed softer natural. There were two small fibrinous retions in the heart, the only coagula with. The right lobe of the liver was iderably enlarged; its lower edge reached level with the umbilicus; there was a sulcus running transversely across it, level with the lower edge of the car- es of the ribs, broad enough to admit inger. The liver had a nutmeg appear- , the paler part being in granules; there some portions of scirrhus hardness, one em about as big as an orange in the an line near the lower edge, except one wo small specks on the upper surface; e hardened portions were below the sulcus uced by the apron strings. The kidneys somewhat larger than natural, but rwise healthy; the spleen was dotted all internally by small white granules. stomach was contracted so much that it ed like a small intestine, except a ded portion to the left of the cardiac e. It was nearly empty, containing two or three spoonfuls of red liquid, a vinous odour, of the consistence of l; the coats of the stomach were very except near the pylorus, where there a thickening of the submucous cellular e; the inner surface was red from rescent vessels, more especially at the iac end; the mucous membrane seemed lved from this end, and in the other s it was so soft that it could be scraped with a scapel. The skull varied in thick- s from about one-third of an inch in t to about three quarters of an inch at sides and back; it was composed almost rely of spongy texture, the outer and inner tables being scarcely apparent. It was softened so that the chisel broke, or rather dug out, portions of it in trying to lift off the skull cap, and we are able to tear it off with the hands, although the saw had not gone through it, except in front. The calvarium, when removed, was very heavy, and although sawn off at the usual place, was but little hollowed internally. The brain was smaller than usual; the sinuses were much distended with black liquid blood, although the head was raised, and a large quantity of blood had been removed from the chest. The substance of the brain was dotted with numerous dark red specks of vascularity. There was a projection upwards, and a roughness of the posterior part of the sella turcica. The petrous portion seemed also thickened.

Dr. **Frederic Bird** read a paper

On the Diagnosis and Pathology of Ovarian Tumors,

Introducing the narration of a case in which he had recently removed a very large tumor from a patient in whom a previous attack of peritonitis had led to the formation of numerous and strong pelvic adhesions; recovery had been rapid and complete. In the first part of his paper, the author alluded to the changes in structure and secretion observed in the lining membrane of ovarian cysts, under the influence of certain exciting causes; and adduced cases in which the same ovarian cysts had within short periods yielded totally different secretions. In almost all such cases, the change could be traced to the constitutional depression consequent upon the exhibition of remedies supposed to be efficacious in the treatment of ovarian disease, more especially of mercury and iodine; whilst, in a numerous class of cases, similar effects had resulted from local pressure, produced either by great distension of the sac from contained fluid, or from the employment of powerful external pressure. He regarded the use of such means as always useless, and often mischievous. He believed the duration of life in those affected with ovarian disease to be shorter than had generally been stated. In fifty of the cases occurring in his own practice, in which the operation of excision had been negatived, he had found that the average duration of life scarcely exceeded three years from the commencement of abdominal enlargement. He believed that almost all ovarian tumors were referable to the same type, and that unilocular and simple cysts often assumed multilocular forms, and rapidly assumed more marked malignancy; that the diagnosis of ovarian tumors, though often difficult, might be determined in the majority of cases with much accuracy. The author then proceeded to explain the means he employed for ascertaining the existence or non-existence of peritonæal adhesions; of the presence of solid matter in the basic and parietal portions of the cyst; of the attachments to the uterus; and of the absence of pelvic adhesions. The evidence upon which he was accustomed to found the diagnosis was deduced from the alteration effected in the relative position of the tumor under different frequencies of respiration and diaphragmatic movements; and he exhibited apparatus employed for the purpose of treating the mobility of the tumor by forced respirations; whilst the presence of solid matter could be detected by percussing in right lines through different parts of the tumor, and carefully estimating the amount of impulse communicated to the opposite hand, as it would be found that the fluctuation would be interrupted by the presence of solid matter; that although marked fluctuation might be felt on one side of the abdomen when percussion was made over the solid growth, yet that upon reversing such manipulation, it would be found that no fluctuation can be detected at the point where solid matter had been formed. The direction of the os uteri and the mobility of the uterus were the data from which he adduced the opinion of the absence of morbid attachment of the ovarian mass with that organ; that such examination could be most satisfactorily made by the use of the uterine sound of Professor Simpson, the introduction of which instrument he regarded as a most valuable and important addition to the means of investigating diseases of the uterine organs. He was induced to attach little or no importance to the previous history, as he had frequently found extensive adhesions present when the history of the case furnished no evidence of peritonitis ever having existed. Peritonitis could occur without pain, just as adhesions might exist without crepitus; and he believed that adhesions constantly occurred in cases in which much pressure was exercised upon the sac without giving rise to acute symptoms, or causing interruption to the general health. Contrary to the opinion commonly received, ovarian tumors did not, as a general rule, appear on one side of the abdomen, nor did any anatomical reason exist for their doing so; and experience had taught him to regard unequal distension of the abdomen rather as evidence of the presence of solid matter or peritonæal adhesions. Of the propriety of performing the operation in well-selected cases, Dr. Frederic Bird believed there could be no question; and although he did not advocate its premature performance, yet that in all cases of ovarian disease, a period would be found to occur in which the early manifestations of constitutional suffering could be perceived, and that at such period the operation might be performed with the full probability of preserving the life of the patient. He regretted that he could not add any statistical tables in support of the opinions he had advanced, as, unhappily, the unjustifiable suppression of fatal cases in which the operation by the large incision had been performed wholly destroyed the practical value of such records. Dr. Frederic Bird had read the details of his late operation, and concluded by observing that the general results at which he had arrived, as regarded the treatment to be adopted in ovarian disease, was to extirpate the tumor in all cases favourable for the operation, and in which no obscurity in diagnosis remained to render its performance unusually hazardous; that in all cases it was the safest practice to abstain from the use of the remedies formerly advocated—as, for example, mercurials, drastic purgatives, diuretics, &c.; and that in cases in which the operation of excision was negatived, frequent and early tappings, aided by constitutional remedies, afforded the most probable means of prolonging life. The practice of employing powerful abdominal pressure by bandages, enveloping pads, books, and such compresses, should be carefully avoided, as tending to produce adhesions and change in the character of the cystic secretion. Still more dangerous was the practice of forcibly compressing the abdomen by tight bandaging, and of administering mercury, and puncturing the cyst, whilst the patient is under the influence of mercury. He had unhappily seen several cases in which such mode of treatment had been followed by the worst effects; the infliction of a punctured wound during a state of ptyalism had led to purulent secretion, and the patients had died as from the effects of a gigantic abscess. Such treatment was in itself irrational and dangerous, and in nearly all cases led to the complete prostration of the vital powers—the conversion of a serous into a purulent secretion—the formation of peritonæal adhesions—and, in several instances, to the destruction of life.

Dr. MURPHY made some remarks on the importance and difficulty of diagnosis in cases of ovarian disease. He related briefly the case of an unmarried lady, who applied to him, about two years since, with a large pelvic tumor. On examination of the swelling by the abdomen, there was no fluctuation detectible; the tumor had the situation and shape of the gravid uterus per vaginam; the cervix and os uteri were found in the centre of that passage. Externally, the uterus might be, apparently, grasped between the two hands. It was suspected that the uterus contained an enormous fibrous tumor, though he (Dr. Murphy) had never seen or heard of a fibrous tumor of

d in the country. There was evident
tuation, and the true nature of the case,
ch was ovarian dropsy, was apparent.
re could be nothing more important,
n respect to the performance of the
ration for removal of ovarian cyst, than
early diagnosis.

r. **Brooke**, in allusion to the mode of
cting the locality of solid matters in
ine tumors, related a case which occurred
the Westminster Hospital some years
e, and in which the mode recommended
Dr. Bird was employed with success.
same mode of diagnosis assisted us in
rmining whether the tumor consisted of
or more cysts, and even if there were a
rence in the contents of the cysts.

r. **May** said, that pressure had been
employed in the case related by Dr.
, but it produced vomiting, and arrested
secretion of urine. The patient had
in two of the London Hospitals, in
h mercury and iodine had been exhibited
er with the effect of reducing the general
gth, but not the size of the tumor. He
eeded in restoring her general health by
se of iodide of iron and tonics. The
pound iodine ointment applied over the
or had appeared to decrease it materially
ze; indeed, she was two inches smaller,
ix weeks, under its use. The bowels
kidneys also acted better.

r. **Holt** briefly narrated two cases of
ian disease, in which the mode of
nosis detailed by Dr. Bird had by that
leman been successfully employed, al-
gh the opinions he had expressed were
rary to those of others in consultation.
r death, examination proved the correct-
of the diagnosis which he had made.

r. T. S. **Lee** said, that one of the great
ctions to ovariotomy was the difficulty
diagnosis which obtained in cases of
ian disease. He agreed in the opinions
practice of Dr. Bird regarding the
nosis of these cases, and related two
nces in which that gentleman had
essfully detected extensive adhesions, as
proved by post-mortem examination.

r. F. **Bird**, in relation to the effect of
pound iodine ointment in Mr. May's case,
ained the apparent decrease in the
or, by its action on a small quantity of
in the peritonæum, which frequently
ed in connexion with ovarian disease.

r. **Murphy** inquired the experience of
Bird with respect to moderate and early
ied pressure in cases of unilocular cysts.

r. F. **Bird** believed that no degree of
sure excited any beneficial influence on
umor. In some cases it appeared to
ease the size of the swelling, but it only
ned the circumference of the abdomen
pressing the intestines underneath the
He related a *case in which severe* pressure produced a femoral hernia, and thereby hastened the fatal result.

Some discussion took place regarding the statistics of the operation, but, as Dr. F. Bird justly observed, we necessarily had but an imperfect knowledge on this point, in consequence of the disgraceful and dishonest suppression of the reports of fatal cases by some operators.

MEDICAL SOCIETY OF LONDON.

Monday, Nov. 16.

Mr. **Dendy**, **President**.

The discussion on Dr. Hughes's paper was resumed.

Dr. **Hughes** again referred to the sudden onset of acute pneumonia in the case, to the occasional difficulty of diagnosis of tubercle from the solid encroachment, and to the formidable nature of these conditions when combined.

Mr. **Lloyd** referred also to the difficulty of diagnosis of tubercle in the early stage of its development, and related the case of a boy who had been employed by Lieut. Waghorn on his overland route, whom he (Mr. Lloyd) saw on his arrival in England. Dullness on percussion over the apex of the left lung, combined with symptoms of pneumonia, were present. The boy was bled to eight ounces, and calomel and opium were given. After a time, he (Mr. Lloyd) suspected tubercle, and changed his mode of treatment. The patient, however, died in about three weeks; and, on examination, there was purulent effusion in the left pleura, and communication with the lung. In both lungs there were tubercular cavities.

Dr. **Willshire** did not think there was so much obscurity in the symptomatology of tubercle, and related a case which had been under his care, in which there was undoubtedly a tubercular cavity and laryngeal ulceration, and yet the patient was enabled to take voyages between Dover and Boulogne and Calais without much difficulty.

Mr. **Headland** thought that the presence of tubercle could usually be determined from concomitant circumstances and the general character of patients. There was no reason why a patient with tubercle should not continue to exist. He referred to three cases which a very experienced auscultator had refused as ineligible for insurance; two of these patients had also been presented to himself. In these there was undoubtedly tubercular disease. He thought calomel was not advisable in these cases, but would employ tartarised antimony and opium, and extensive vesication, or other counter-irritants.

Dr. GOLDING BIRD also spoke on the difficulty of diagnosis in cases of this description.

Dr. CLUTTERBUCK thought that tubercle, like most other morbid products, was the result of inflammation in persons peculiarly predisposed to disease in the lungs, and he would employ repeated small bleedings in general antiphlogistics, not with a hope of completely curing the patient, for, sooner or later, the disease would prove fatal. He thought calomel and opium should not be employed; he eulogised the influence of congenial climate in such cases.

Dr. T. THOMPSON thought constitutional symptoms of great value in the diagnosis of these diseases. The definition of pectoriloquy by Laennec was not correct: the sound usually observed was not that of air rushing towards the stethoscope or ear, but as if it made a sort of circular current within the cavity of the thorax. He thought the iodide of potassium very serviceable in cases similar to the one under discussion.

After some further remarks from Dr. HUGHES and other members, the Society adjourned,

The PRESIDENT observing, in the course of his remarks, that the discussion had reference rather to chronic or subacute than to that acute form of disease so accurately described by Dr. Hughes.

PATHOLOGICAL SOCIETY OF LONDON.

November 16, 1846.

THE VICE-PRESIDENT IN THE CHAIR.

IT was announced from the Chair that the Council had unanimously resolved—"That the admission fee of one guinea be not exacted from any gentleman proposed as a member of the Society before January 1st, 1847."

Rupture of the Uterus.

Dr. LEVER presented the uterus of a woman, aged 28, who had given birth to four children at three confinements, the first being a twin-labour, both the children males, and in both there was an arrest of development of the sexual organs. Although in the daily expectation of her confinement, she had busied herself about her domestic concerns; and at 11 A.M. on the Friday she expressed herself as feeling very tight, and thought she should be confined towards evening. Soon after 3 o'clock she felt a violent fœtal movement, followed by pain and a sensation of faintness. She was seen at half-past 3, and found sitting in a chair, supported by an attendant, gasping for breath, her face pallid, somewhat livid, nostrils dilated, eyes staring, a cold perspiration bedewing the body, pulse scarcely perceptible. A vag

mination found the os uteri clo
rallied under the administration
lants, and at 8 P.M. a second vag
mination detected the os uteri as
crown-piece. There were no labo
but she complained of a little
stomach-ache. At 10, the pulse
and scarcely perceptible. The pre
fluid in the peritoneal cavity was pl
tected; the quantity of liquor am
very great, and the uterus felt ex
tense. She was delivered by artif
sistance, and died at half-past 8 A.M
child was a male: its sexual organs p
the same deformity as those of the
On examination 32 hours after de
surface of the body was very pale.
abdominal section, a large quanti
and coagulated blood, estimated at be
five and six pints, was found in the p
næal cavity. All the viscera of the
and abdomen were pale, but healthy
uterus was large, soft, and pulpy.
fundus there was found a laceration
peritonæal coat, passing transversel
posing the proper tissue, but not imp
it. On the posterior part of the
the viscus, and to the right side, the
another laceration, of zigzag form, in
ing the superficial uterine fibres, a
posing a large vein, from which, do
the greater portion of the blood fo
the peritonæal cavity had proceeded.

Dr. RAMSBOTHAM stated that rupt
the uterus from violence sometim
curred, but that cases of spontaneou
ration were remarkably rare, few
having been recorded.

Dr. F. RAMSBOTHAM exhibited a
men of what he considered a

Very Rare Case of Uterine Dis

so rare, indeed, that he only knew of
similar published in English medical
ture: one by the late Dr. John C
the third volume of the "Transacti
Society for the improvement of Me
Surgical Knowledge;" another,
Coley, late of Bridgnorth, in vol
"The Provincial Medical and
Transactions;" and the third, rep
Dr. Gooch, "Diseases of Wom
fourteenth case. The same case
given by his (Dr. Ramsbotham's) S
his "Practical Observations on Mid
it will be found at page 411 of the
edition. He remarked that his
history is much fuller and more co
Gooch's, because Dr. Gooch only
patient two or three times, while
was in constant attendance upon

e published in the MEDICAL GAZETTE uly 11, 1835.

e disease seems to consist in ulceration e whole or chief part of the lining rane of the uterus, under which the tes of the organ become softened in ture much as they do in pregnancy, generally irregularly thinned in sub- e, while the cavity is considerably d, and contains coagula, unhealthy, , pus, and portions of shreddy fibrine, a ad res with greater or less tenacity e. nternal surface. In the specimen ited, the cavity would hold a large e; in his father's case, it would have ined a fœtal head at birth. In the ace before the Society, although the ipal part of the lining membrane of the is destroyed by the ulcerative process, Little of the fibrous substance is eaten and the parietes have consequently ost much of their original thickness. father's case, at some points near the c, little was left besides the peritonœal ing; and in Mr. Coley's case the as portion was so completely disorgan- that it was not thicker than an ox's er; in some places it was altogether yed by ulceration; and at one spot it o thin that the peritonæal coat gave on the application of slight pressure, a quantity, to the amount of three , of a dark-coloured offensive fluid, ed into the abdomen. At other parts, ll as at the spot where the laceration place, the fibrous structure was quite oyed, and, on being divided, the pa- of the uterus collapsed, like moist -leather, its average thickness being ed to the eighth of an inch. In an- preparation of the same disease ex- d by Dr. Ramsbotham to the Society, h had been in spirits many years, and a ing of which is given in his published re already referred to, the ulceration ed the whole mucous lining, and had extended through the peritonæal cover- uring life; for there is a jagged, sloughy, lcerated, aperture at the fundus uteri, gh which the tips of three fingers l be passed with ease, no part of the tes being thicker than the eighth of an ; and the same kind of aperture was d by Dr. J. Clarke in the case which s detailed.

is disease (Dr. Ramsbotham observed) eresting in three points of view: first, ccount of its rarity; secondly, because ree out of the four cases it was mistaken pregnancy—(in Dr. Clarke's case, in- the woman was 65 years old, and fore pregnancy *was out of the question*; *in his father's case the symptoms so y resembled those of pregnancy that empt to induce premature labour was* made at the suggestion of Dr. Gooch); and thirdly, from its fatal tendency. It is unlike the more ordinary cases (although they are also very rare) that have been reported under the term *hydrometra*, such as that given by Dr. A. T. Thomson in the 13th volume of "The Medico-Chirurgical Transactions," as well as others noticed by Boivin and Dugès, because in them the internal surface of the uterus had undergone no perceptible morbid change, and because the os uteri was obliterated by adhesion: in Dr. Thomson's so perfectly, that although its situation could be traced from the vagina, yet internally it was no more perceptible than if it had never existed. In the cases under consideration, on the contrary, the os uteri was pervious; but in Mr. Coley's, indeed, it was plugged by a tough mucus, resembling that secreted in pregnancy.

The case which was the immediate cause of this affection of the uterus being brought before the Society, offered another ground of considerable importance, because it was complicated with another rare disease—mollities ossium—of about twelve years' standing, during which time the patient had lost eleven inches in height. Being at her marriage five feet high, when she died she only measured four feet one inch. She was married sixteen years ago, in her 20th year; and, during the first four years and a half, had three living children. She then had a dead child, after a very severe labour, shortly before which pregnancy the disease would appear to have commenced. Another child was delivered by craniotomy; and in her last pregnancy, six years ago, premature labour was induced at five months, and the fœtus, thaugh so small, passed with difficulty. At the time of her death, the pelvis had become so highly contracted that, from the promontory of the sacrum to the symphysis pubis, it measured only one and three-eighths of an inch; on the right side, in the same direction, one inch; on the left side, three-quarters of an inch. The right oblique measurement was three inches; left, three and a quarter; transverse diameter, three; depth from brim to tuber ischia on right side, three inches and five-eighths; left, three inches; space between spinous processes of ilia, nine inches; between tubera ischiorum, three inches. The lower part of the spinal column was so much thrust downwards and forwards that the upper part of the fourth lumbar vertebræ was opposite the symphysis pubis, and the sacrum was exceedingly bent. Thus, the pelvis, during the last eleven years and a half of her life, had become diminished from at least three inches or more in the conjugate diameter at the brim, affording a space sufficient to allow the passage of a live child at full time to the small size just noted. The vertebræ, bones of the pelvis, and head of the femur, were so soft as to be easily cut with a cartilage knife, of a dark colour, and spongy appearance, with a thin layer of osseous matter externally: a quantity of thick oily matter oozed from their sections when scraped. The thickness of the pelvic bones was much diminished. (Some portions of the cut pelvic bones were handed round the room).

Dr. RAMSBOTHAM read the following account, furnished to him by Dr. John Hall Davis, with whom he saw the patient in consultation:—"Two years ago she had sustained a severe loss of blood, both fluid and clotted, from the uterus, and was then considered in danger; but nothing like a fœtus came away, as far as could be learned. Up to October last year, she menstruated with perfect regularity. The function then ceased until April of this year, when she menstruated once; since which there has been no catamenial appearance. She therefore thought herself pregnant, especially as she further had enlargement of the breasts, with a secretion of milk in them, morning sickness, enlargement of the abdomen, and a sensation as though she had quickened. I visited her first," writes Dr. Davis, "on October the 24th. I could distinguish no well circumscribed solid enlargement of the uterus which one might expect to have found at five and a half or six months of pregnancy, and especially with an extremely contracted pelvic brim. The application of the stethoscope gave no sign of pregnancy; there was no varicose state of the veins, which she had had in her former pregnancies; the breasts were enlarged, and contained a milky fluid,—a state in which they had not been for six years, since her last pregnancy; but this could not be considered of itself of great value.

"*Examination per vaginam.*—The conjugate measurement of the pelvic brim, as well as could be taken with the outlet of the pelvis, also a good deal contracted, did not give more than an inch and a half, if so much, and there was perceptibly less space on either side of the sacral promontory. The mouth of the uterus was found open, admitting the tip of the index finger; the part of the uterus above, and immediately adjoining the vaginal attachment, could not be felt, owing to the narrowness of the brim; so that no idea could be formed as to the degree of uterine enlargement or development by the vaginal examination. I now passed in a staff, or bougie, to measure the length of the uterine cavity, and it proved to be five and a half inches, showing an expanded cavity to a considerable extent. Withdrawing the bougie two inches, that it might not press against the fundus, I left it in situ for five hours secured by tapes, the bladder having been first relieved. At the end of that (ergot of known good quality having been given in the interval) no action had been induced, and the instrument was removed. A sponge tent was then introduced within the uterine orifice, and the vagina was plugged with sponge. This was withdrawn on the following night. Some bearing-down pain had been occasioned, but that ceased; on the removal of the plug, some [illegible] mucus, and a slight sanguineous discharge blended with mucus, came away. During the following day she got up, and sat as usual in her chair, thinking that her child would be born on the seventh day, as on the previous occasion.

"On Friday, the 30th, Dr. F. Ramsbotham saw her with me and her ordinary medical attendant: his opinion was, that she was not pregnant, although the os uteri gave the sensation of pregnancy to the finger, founded partly on the result of what had been done, supposing premature labour would have followed the means used, and also upon the information, of a negative kind, furnished by the taxis to the hypogastrium, and the absence of varicose veins, which she had had in all her former pregnancies. He found the same length of cavity which I had done, and concluded that it was a case of extension of the uterine parietes and cavity, attended by ulceration of the lining membrane of the uterus, with pus and dark grumous blood for contents, a material of this kind having come away in his catheter.

"On the following morning she was seized with a shivering, and at three P.M. with a severe flooding. I saw her at 6 P.M., plugged the vagina, and the flooding was arrested. About seven the plug was removed. A profuse action of the bowels set in from about two drachms of castor-oil, which she had taken in the morning, and she speedily became prostrate, with cold clammy skin and dyspnœa; the pulse scarcely perceptible. Her medical attendant remained with her during the night, plying her with beef-tea, and small quantities of brandy-and-water; and about every two or three hours exhibiting the only form of opium she could take—the compound tincture of camphor. In the morning she had rallied; her pulse was good; the temperature of the skin natural; but the breathing was very difficult, which she attributed to the dense fog of that day; there was some red discharge, mixed with fibrinous matter, evacuated during the day.

"On Monday the napkins were very [illegible] coloured, and afterwards, not at all; but she gradually suffered more and more in her breathing. This continued during Tuesday; she became worse at night, and did

rmity, has been unable to abduct the
h-bones in the least. She has not been
to get into bed herself; her husband
lifted her in, and during the same period
at, she has required to be assisted even
naking any change of position in her bed.
could not lie on either side, without
aggravation of a dyspnœa and cough,
h she has had ever since the deformity
r chest became so extreme; her position,
fore, when recumbent, has been con-
tly on her back. She could move
lf along a plane surface on crutches,
went up and down stairs in a sitting
are, shifting herself thus from step to

She was very intelligent, and of an
ble disposition. She has greatly assisted
usband in some drawings in which he
een engaged. Her legs and arms did
artake of the deformity, probably from
having been subjected to the same
sure as the spine and pelvis; but they
much attenuated."
e immediate cause of this patient's
, continued Dr. Ramsbotham, appears
ve been inflammation of the lungs; and,
les what has been already detailed in re-
to the size of the pelvis and condition
e bones, the following appearances pre-
d themselves on post-mortem examina-
The body was greatly emaciated,
uring, as before stated, four feet one
in length; the cavity of the chest was
contracted; the pericardium rather
ue and thickened; no more serum in
cavity than natural; the heart perfectly
hy, but small, and rather flattened pos-
rly; no pleuritic adhesions, nor any
ion into either cavity; the lungs small
much congested, sinking in water, not
ting; of a dark colour; no appear-
of hepatization, nor traces of tubercles;
liver small, softened, of a yellowish
r; two gall-stones in the gall bladder;
e other abdominal viscera healthy; the
es small, wasted; no sign of a corpus
m. The uterus was enlarged, measur-
five inches from its mouth to fundus;
ture softened; parietes not much altered
ickness; but the internal membrane, as
t be seen in the specimen presented,
destroyed at different parts by ulcera-
and the cavity contained fœtid pus and
en-down coagula; the ulceration was
evident towards the cervix than at any
part.

r. **Prescott Hewett** inquired, if upon
ection, tuberculous matter had been
d in the lungs. He had examined
al cases of *ulceration of the mucous
brane of the uterus in which such had
the case, and in all the ulceration ap-
to have arisen from the deposition of* strumous mattter in the submucous cellular tissue.

Dr. **Ramsbotham** replied, that there was no appearance of tubercles in his case.

The preparation is in the possession of Dr. Ramsbotham.

Dr. **Clendinning** read a communication from Dr. **Boyd**, of the Marylebone Infirmary, on a case of

Aneurism of the Aorta bursting into the Œsophagus,

And exhibited the specimen to the Society. It was taken from a patient, aged forty-five, who was brought into the Marylebone Infirmary, suffering from emphysema of the lungs, and who died four days after admission, being too ill at the time of admission to be subjected to a minute examination. The symptoms that came on on the morning of his death were nausea, and hacking cough, followed, by the ejection of about half a pint of blood. He died within ten minutes after the escape of the blood. He had been in bad health for four years, and had suffered from cough for several winters. The body was examined twenty-four hours after death. Old pleuritic adhesions were observed on both sides of the thorax, the lungs emphysematous, the lower lobe of the left being infiltrated with bloody serum. The heart, larger than natural, weighed thirteen ounces; its valves were healthy; and beneath the inner membrane of the aorta were specks of steatomatous deposit, more abundant a little distance from the heart than elsewhere. At the commencement of the arch were two shallow pouches, the larger about three quarters of an inch in diameter; the other below, about half that size. At the transverse portion of the arch, there was a deep aneurismal pouch, filled with fibrin, one inch and a half in diameter, and firmly attached to the front of the trachea. About two inches further on, at the back part of the descending portion of the aorta, was a large aneurism, four inches in diameter, formed of layers of fibrin, resting posteriorly on the bodies of three of the dorsal vertebræ, which had undergone considerable absorption. The coats of the aorta were deficient in two-thirds of the large aneurismal sac. The œsophagus was attached to the aneurism posteriorly. Its mucous membrane was ulcerated on the right and left side, the ulcer, in the later situation, having involved the muscular coats of the canal, and communicated with the interior of the aneurism by an oblique sinus, more than an inch in length, directed downwards and outwards. The ulcer was a quarter of an inch in diameter. The stomach was filled with a clot of blood, which extended about two inches in each direction into the œsophagus and duodenum.

The clot weighed thirty-four ounces. The kidneys were atrophied, very pale, and slightly granular.

Dr. Ogier Ward wished to know whether there were any indications of inflammation, independent of the deposit of fibrin, at the root of the aorta, as he felt inclined to believe that the aneurism was the result of inflammation; in support of which view he related briefly a case which he had an opportunity of examining, and which consisted of two small aneurisms at the commencement of the arch of the aorta, accompanied with an abscess between the coats of the vessel, and considerable deposit of fibrin round its root and that of the great vessels.

Mr. N. Ward read a communication from Mr. Adams on a

Fibrous Tumor of the Lower Jaw.

The preparation, accompanied with a drawing by Mr. Gowland, was exhibited. The tumor, with the portion of jaw implicated in the disease, was removed by Mr. Adams from a healthy man, aged twenty-four, who first complained of toothache five or six years ago, for the relief of which a molar tooth was extracted at the time. About twelve months afterwards, a substance was observed growing from the part originally occupied by the tooth, and continued to increase in size until two years ago, when he placed himself under the care of a practitioner in the country, who removed the tumor by the application of the cautery and caustic. It soon, however, grew again, and continued to increase until his admission into the London Hospital, two months ago. The tumor had then attained the size of a small orange, and appeared to spring up between the plates of the bone close to its base, the plates being separated so that there was a considerable bulge externally, and protrusion into the mouth, in the form of a large lobulated mass, highly vascular. It occupied the left side of the lower jaw, from near the symphysis to the angle. The man was well in ten days after the operation.

The tumor, on section, was found to be of a simple epuloid character, and had evidently sprung from the cancelli near the base of the jaw; it presented a beautifully striated appearance, the striæ passing in a vertical direction. Its free surface was impressed with the crowns of the molar teeth of the upper jaw. It had gradually thinned out the lamellæ of the bone, which in some parts was reduced to a mere shell. The fibrous arrangement of the tumor was well represented in the drawing.

Mr. Toynbee exhibited a series of

Microscopic Preparations of the Kidn
Illustrating some of the principal vie

tertained by him relative to the minu
tomy of that organ in its healthy and dis
condition.

Dr. George Johnson stated the r
of a

Microscopical and Chemical examinatio
a Kidney affected with Morbus Brighti

The kidney examined was one exhibited
the President on Nov. 3rd, an account
which will be found in the last report.
was larger than natural, and of pale co
On examining sections under the microsc
there were seen many opaque dark patch
which, on a hasty examination, appeared
be confused masses of granules and globul
On a more careful examination of very th
sections, these patches were found to con-
sist of convoluted urinary tubes, filled, dis-
tended, and in many cases ruptured, by
accumulation of globules in their inte
Several of these sections were digested
some hours in ether, and again subjected
microscopical examination, when it w
found that the globules had entirely disap-
peared, and the patches, which were pre-
viously opaque and dark, were now trans-
parent and clear. The apperrance of the
globules under the microscope would ha
been sufficient to satisfy Dr. Johnson
their oily nature. The result of digestion
ether confirmed him in his opinion, and w
perhaps convince some who would not
satisfied with a mere microscopical exam
tion. One hundred grains of this kidn
were dried over a vapour-bath; the dr
residue weighed thirty-one grains and a ha
This was digested in ether, and on evapora-
tion of the ether, 3 $\frac{7}{10}$ of a grain of fa
matter remained.

Was there any other deposit or accumu-
lation in this kidney? None that could
discovered. There were no products
inflammation in those portions of the gla
which contained no oil; some of the tub
appeared quite healthy, while others seem
to be shrunk and atrophied, probably
consequence of the destructive pressure wh
the dilated urinary tubes had carried u
the surrounding bloodvessels. We have he
then, an accumulation of globules in the tu
and epithelium of the kidney, produ
distension and even rupture of the tube
tubes, thesg lobules possessing a
tive power and the general appearance
globules, and dissolved by ether.

Dr. Williams said that the kidn
exhibited at the last meeting appeare
contain a large quantity of oil-globules
that the symptoms manifested by the pa
varied somewhat from their ordinary

oats in the urine, considerable exudation of lood-corpuscles, and a large quantity of ranular matter.

Dr. R. **Quain** observed that he had xamined the specimen of kidney which was e subject of Dr. Johnson's observations; it he had found more fatty matter than ual; and this fact he had mentioned to r. Johnson at the last meeting. He did ot, however, believe that fat was the esntial element of Bright's disease. He had und masses, some as large as peas, of llow deposit in the kidney. This matter, ewed with the microscope, was seen to semble closely that found in the cells thin the tubes, and also outside them, in e parenchyma; and on this matter he had owed ether and liquor potassæ to act for lengthened time, without, as far as the ner was concerned, any perceptible effect; us shewing the absence of fat. He beved it to be a cacoplastic fibrinous matter. reference to Mr. Toynbee's observations the termination of the uriniferous tubes, (Dr. Quain) fully coincided in that genman's opinion, that the tubes did not all minate in the Malpighian corpuscles. He d seen them filled with this matter, ternating by blind extremities, as Mr. Toyn had shewn by his beautiful injections. was satisfied, too, from the examination specimens shewn him by Dr. Hughes nneit, that the tubes frequently terminated forming loops.

Dr. **George Johnson** exhibited a speen of

Congenital Malformation of Pelvis,

ich occurred in the practice of Mr. Charles yo, Senior Surgeon to the Winchester unty Hospital, and the particulars of ich are reported at length in the *Procial Medical and Surgical Journal* for ptember 26th, 1846.

"The symphysis pubis was separated to extent of seven inches, forming two minent points like additional spines of ilia, having a ligamentous band half an h broad stretched between them."

he patient, a female, aged 29, was an nate of the Winchester Hospital, and d from the irritation produced by the sence of a large stone in the bladder, nplicated with extensive disease in either ney.

tensive Extravasation of Blood in the Brain.

r. **Bence Jones** exhibited the brain of oman, aged 54, who had died of apoxy. Blood was observed all over the face of the visceral arachnoid, not quite much on the upper as on the lower part; beneath the arachnoid, as well as been and beneath the convolutions. In the post-mortem examination, the heart was also observed to be larger than natural, with slight atheromatous deposit at the root of the aorta, cut on the mitral valve. The attack of apoplexy was quite sudden, the patient having left St. George's Hospital convalescent from some uterine affection, and was re-admitted on the evening of the same day, suffering from an attack of apoplexy, the symptoms being, excessive restlessness, little or no pulse, blanched and cold extremities. The re-action was very slight, as she sank 22 hours after the attack, and 20 hours after admission.

Dr. **Williams** inquired what was the condition of the central sinuses and kidneys, he having observed that sudden hæmorrhagic apoplexy and diseased kidneys were very constant concomitants.

The meeting adjourned until Monday, December 7th, at 8 P.M.

Correspondence.

DEATH FOLLOWING THE REMOVAL OF A BURSAL TUMOR FROM THE PATELLA.

Sir,—As I think it the duty of those who meet with instructive and interesting cases to lay them before the profession, and not to confine themselves to successful cases only, but also to record the unsuccessful, if they may be useful, I send you the following account of removal of a bursal tumor from the patella, which, unfortunately, was followed by fatal results.—I am, sir,

Yours respectfully,
Henry Smith, M.R.C.S.
Late House-Surgeon to King's College Hospital.

M. R., æt. 32, applied to me in August last. She had an enlargement over the left patella: it was hard, and apparently solid, and it had existed for several years; it had latterly become very troublesome, and had much inconvenienced her by its size, which was about that of a small apple.

She was anxious for its cure, and on my telling her there was no other method but a removal of the tumor by the knife, she readily consented.

Aug. 11th.—I removed the tumor by making a longitudinal incision through the skin to the surface, and then carefully dissecting on each side, and removing the whole mass from the patella. The operation was rendered a little difficult from the skin being intimately adherent to the surface.

The nature of the tumor was rather remarkable. It was solid, hard, almost cartilaginous, surrounding, as it were, the cavity of the bursa, which was found in the centre, apparently healthy. The edges of the wound were brought together by stitches and adhesive plaister, and the limb placed in the straight position.

12th.—Wound looking healthy; no inflammation around it.

14th.—She has been very feverish; a blush of erysipelas has appeared around the knee, and red streaks are apparent in the thigh as far as the groin, where the glands are enlarged. I applied the lunar caustic over and around the inflamed parts, and ordered a saline mixture.

15th.—The erysipelas has not extended further, but there are evidences of more severe mischief deeper. There is a large tense swelling as big as the fist above the patella, and it is evidently full of fluid. She complains of excruciating pain about the knee. She has been vomiting constantly, and is very restless. As the swelling did not appear to be in the joint, and it was very tense, I made two punctures with a narrow bistoury, and evacuated a considerable quantity of bloody serum. I ordered twelve leeches to the part, and calomel and opium to be taken frequently.

16th.—She has been relieved from her sufferings by the remedies, but the inflammation appears to be running on unchecked. The whole knee and thigh are much swollen. Tongue is brown; pulse feeble.—To apply eight more leeches. Continue Calomel and opium; take some ammonia.

17th.—The tissues about the knee, and the whole of the thigh, are enormously swollen; just above the joint on the outer side, where the swelling is most prominent, there appears to be deep-seated matter. A bistoury was carried deeply down in that situation, and a quantity of unhealthy looking matter escaped. The constitutional symptoms are uncommonly severe.—To apply poultices and fomentations to the limb, and to take wine and ammonia.

18th.—After having passed a dreadful night, she died at 7 A.M., just a week after the operation. I was allowed to examine the limb.

The whole limb was enormously swollen. The tissues under the skin were much infiltrated with a serous fluid. Just above the knee-joint, where most swelling was observable during life, the chief mischief was found. A large cavity, into which I could put my fist, was found; it was nearly empty, but it contained some dirty-looking pus. I found that I had carried the knife, during life, quite into the centre of this large abscess. The inflammation did not appear to have attacked the joint itself, as I had anticipated.

This is one of those unfortunate accidents which have not unfrequently, I believe, happened after operations in such affections. It is this circumstance which has determined many surgeons to be very chary about using the knife in cases of diseased bursa of the patella. Mr. Samuel Cooper, in his First Lines, says, "We ought not to open bursæ mucosæ without a real necessity for it, for we occasionally hear of cases in which patients lose their lives in consequence of the limb being attacked with phlegmonous erysipelas." Some surgeons, on the other hand, have no more hesitation in removing such a tumor from the knee than from any other part of the body, and I must say that I have seen extirpation of the bursæ performed to the great comfort of the patient, and without any bad symptoms following; but that the deplorable consequences which Mr. Cooper speaks of are liable to follow such operations, my case too unfortunately proves.

ON THE CONTAGIOUS PROPAGATION OF CHOLERA.

SIR,—The accompanying remarks on infection, more especially as regards pestilential cholera, were communicated to me by a physician whose eminence and extensive experience in various climates are well known to me and many others. I unfortunately mislaid them, and have only now found them. You will oblige me by inserting them in an early number of your work.

I am, sir, yours, &c.,

JAMES COPLAND.

Old Burlington Street,
Nov. 15, 1846.

SIR,—In the *Times* of the 14th of August, 1846, I have seen a letter from an Inspector-General of Army Hospitals, advocating, in my opinion, false and most dangerous pretended facts on a question of great moment—the cholera. The man who believes such facts to be real, *ipso facto* proclaims medical science to be a fraud. The man who asserts that "contagion under any denomination" is an hallucination, has never practised medicine: his medical knowledge must be book-knowledge.

I have practised medicine for nearly half a century. For thirty years of that time I never had small-pox, although I was daily exposed to that disease—living in hospitals, private practice, &c.: still, I believe most religiously that the small-pox is decidedly a contagious disease.

After forty years spent as a medical student, as a clinical clerk in the Edinburgh Infirmary, and in daily practice in all localities, I caught typhus fever, by giving a poor patient a drink upon her death-bed, and was prostrated by typhus 24 hours thereafter. Till then I had never taken one shilling-worth of drugs in my life. I ase. No consideration can induce me to imit this belief.

I was the first medical man who ever saw holera in America. I was quarantine physician at St. Andrew's, New Brunswick. There I boarded the brig Susan, with 123 assengers, from Dublin, on the 9th day of May, 1832. The master made affidavit hat 12 passengers had died (8 of one amily), and that two passengers were sick. ery few had escaped. One woman had een refused admittance at Dublin because he was very ill. The cabin boy and four of he crew had been ill—very ill.

I carried the brig into quarantine. The oard of Health—*almost all merchants*—epudiated my medical opinion, that the isease was cholera, obtained opinions of ther medical men, and thus released the usan from quarantine. The passengers all pidly left St. Andrews; but from two of em I had letters, dated Montreal, 1st and d of June, 1832, threatening to sue me for e value of two feather beds, which I had dered the master to cast into the sea.

From the newspapers, I learned that upon e 15th day of June, 1832, twenty or irty yellow flags were flying in different rts of Montreal. Quarantine being very rictly kept at Halifax, cholera did not pear there till the 21st of July, 1832, ported from Quebec.

I am convinced that cholera spread over merica from St. Andrew's, New Bruns- ck; and I believe that the contagion of phus and the contagion of cholera are opagated by one and the same process, or ode, or law. Not three feet distant from e bed upon which my mother slept, the mains of more than nine hundred victims cholera repose in Dumfries. I do believe at cholera is gradually progressing hither- rd in a second visit. If a contagious ease exists, cholera is the most con- ious. Wherever an Infirmary is lo- ed, there cholera is most virulent and ost fatal.—I am, sir,

Your most obedient servant,

JOHN THOMSON, M.D.

ork Place, Edinburgh,
Aug. 17, 1846.

*** We noticed the Inspector-General's ter referred to in the above correspon- ice, but the statements were of so popular character, so plainly intended for news- per—and not for professional readers, that did not think them at the time, nor do think them now, worthy of serious refu- ion.

LORATE OF POTASH AS A REMEDY FOR PROFUSE SALIVATION INDUCED BY MERCURY.

SIR,—There are few, if any, of your ders who *have witnessed the distress- or alarming local and general effects of* the incautious or improper administration of mercury; the following remarks on a simple and certain means by which they may be obviated or relieved may therefore be useful and interesting.

Having on very many occasions had opportunities of observing the marvellously beneficial influence of the internal use of the chlorate of potassa, not the impure hypochlorite or bleaching compound, but the salt whose formula is K,ClO_6 in the various forms of pure anæmia, in which the intolerance of mercury is notorious, I was led to believe that as these present several striking features of analogy to the state of the system under the full action of mercury, and that as the remedial power of the salt was very remarkably manifested in the former, it might be so also in the latter; and the result of numerous trials has certainly exceeded my anticipations. Whether in severe ptyalism after the free exhibition of mercury in the phlegmasiæ, or in its more sudden and unexpected appearance after an almost homœopathic dose, in anæmia, its salutary effects are alike satisfactory. Certain precautions, however, ought to be observed in the use of the chlorate, for although no immediately bad consequences mark its power in comparatively large quantities, yet if its effects be not watched, and its exhibition suspended at the proper time, a state of the system seems to be induced the very reverse of that to correct which it has been employed; a state, namely, characterised by the phenomena of true inflammation. Viewing carefully the pathological and therapeutical properties of mercury, and the chlorate of potassa, I cannot resist the conviction that they stand to each other in an antagonistic relation, and that each in its own proper place has its specific powers elicited. Your readers will perhaps suggest many practical applications of these remarks.

I am, sir, yours, &c.

JOHN ALLISON.

Bridlington, Nov. 17th, 1846.

*** Our correspondent here refers to the well-known deflagrating or detonating salt, commonly called chlorate of potash, and formerly designated oxymuriate of potash. Its formula is given by our best chemists as KO,ClO^5. There is no oxacid compound of chlorine, that we know of, which contains six equivalents of oxygen. They run 1, 4, 5, and 7. Our correspondent's formula besides, represents a salt of potassium, not of potash. Should the chlorate of potash be found by further experience to possess the property of counteracting the effects of mercury in all cases, it will become a most valuable therapeutical agent. It is well worthy of a trial especially in cases of profuse salivation from small doses of mercury.

Medical Intelligence.

PROGRESS OF THE ASIATIC CHOLERA IN THE EAST.

The *Journal des Debats* quotes a letter from Constantinople, from which it appears that the cholera had subsided in the pachalik of Bagdad: not, however, without making numerous victims. According to letters of the 15th October, no fewer than 4000 persons had died of it in the city, out of a population reduced to 35,000 inhabitants by the emigration of most of the Europeans and a great number of natives. The British Consul had retired to a place called Ctesiphon, six leagues distant from Bagdad, where he placed himself in quarantine with the physician and officers of the consulate and the English residents. The Turkish Governor also intended to remove from Bagdad; but, on being informed that the populace would profit of his absence to plunder the European establishment, he remained at his post, and no disorders occurred. The Consul-General of France, M. Loeve Weimar, was attacked with the epidemy, and was indebted for his recovery to the care of an Italian physician, M. Foresti, then on his passage through Bagdad, and who, being the only European physician after the departure of the English doctor, rendered great service to the population. The Europeans lost the rev. father St. Alphonse, Vice-Prefect of the Latin Mission; and the Mussulmans, Reschid Effendi, brother of Fuad Effendi, late Ambassador of Turkey in Spain. The cholera manifested itself at Tabreez on the 11th of October, and carried off 150 persons during the three first days. Prince Bahuran Mirza, brother of the King of Persia, left the city with his whole court, and his example was followed by all its wealthy inhabitants.—*Times.*

DIARRHŒA INFANTUM.

The last quarterly return of the Registrar-General shews that epidemic diarrhœa was very prevalent and fatal during the summer throughout the whole of the districts of England. At the time when the thermometer was at its highest, the mortality among infants from this cause was at its maximum. A number of aged persons were also cut off by the disease, proving the truth of Casper's statement, that "extremes of temperature are always fatal to the extremes of life"—infancy and old age. Some have looked upon this disease as the forerunner of the Asiatic cholera, but its wide diffusion and fatality are sufficiently
explained by the unusually high tem
which prevailed during the month
August, and September. The n

District Registrars do not in
respects call for notice.

DEGREE OF DOCTOR OF THE
OF MADRID CONFERRED ON
ORFILA.

On a petition from the Faculty
a special ordinance was signed
to enable the University to co
gree of Doctor of Medicine up
brated Professor Orfila. We c
lowing amusing account of th
from a late number of the *Gazet*
—"On Sunday, the 18th Octob
of the Doctors and Professors
versity assembled in great stat
costume, in order to receive M.
was introduced by two Profes
Faculty in full dress. The ordi
Queen having been read, the
Guttierez, proceeded immediate
M. Orfila with a pair of white
then girded on a sword, and pl
hands a gold-headed cane, anoth
placing at the same time a sp
ring on the ring-finger of M.
hand. A few minutes afterward
declared in a loud voice that M
been admitted a Doctor of the
Medicine of Madrid, and the
broke up.

TINCTURE OF LOGWOOD AS A
BICARBONATE OF LIME
SPRING WATER.

M. Dupasquier states that h
spirituous tincture of logwood t
bicarbonate of lime in spring water
ing to this chemist the tincture s
prepared, either cold or with h
logwood recently cut and divid
tincture has a brownish colour, an
four drops being added, instantly
cates a fine violet colour to wa
contains the least trace of bicar
lime. In a water which contains
salt of lime, it occasions only a pale
colour.

Selenitic waters, containing bica
lime, give the former appearance
whereas after being boiled so as t
pose last bicarbonate, the second
ensues from the sulphate of lime.

According to M. Dupasquier, th
nate of lime, which is held in solut
in spring or river water, acts up
louring principle of logwood in
manner as the alkalies or the solub
alkaline carbonates.—*Journ. de C*
Septembre 1846; and *Lond.* an
Phil Mag. Nov. 1846.

On the 11th of August last, at C
Castle, Western Africa, after

DEATHS IN THE METROPOLIS

veek ending Saturday, Nov. 14.

	Deaths.		*Aver. of 5 yrs.*	
69	Males....	467	Males....	493
60	Females .	449	Females .	475
129		916		968

S IN DIFFERENT DISTRICTS.

ver ;—Registrars' Districts, 129.
dation, in 1841, 1,915,104.)

ngton; Chelsea; St. George, iare; Westminster; St. Martin s; St. James .. (Pop. 301,826)	125
Marylebone; St. Pancras; Hackney ...... (Pop. 366,303)	154
.Giles and St. George; Strand; Clerkenwell; St. Luke; East Vest London; the City of .... (Pop. 374,759)	165
litch; Bethnal Green; White- George in the East; Stepney; .... Pop. 393,247)	199
Saviour; St. Olave; Ber- St. George, Southwark; Lambeth; Wandsworth and Camberwell; Rotherhithe; .... (Pop. 479,469)	273
Total	916

CAUSES OF DEATH.

verages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
....	916	1000	968
AUSES	914	992	961
r Epidemic, Endemic, ntagious) *Diseases* ..		206	188
adic Diseases, viz.—	150		
ancer, &c. of uncer- t	88	104	104
.nal Marrow, Nerves, ses	154	151	157
ıd other Organs of tion	282	313	294
Blood-vessels	39	29	27
Liver, and other of Digestion	78	70	72
f the Kidneys, &c. ..	6	8	7
, Diseases of the &c.	19	11	10
sm, Diseases of the Joints, &c.	14	6	6
ılar Tissue, &c.	4	2	2
....	53	66	67
Privation, Cold, and erance	4	27	26

ıg is a selection of the numbers of he most important special causes:

......	3	Convulsions	49
....	6		
......	19	Bronchitis	67
'ough ..	25	Pneumonia	69
....	15	Phthisis	118
....	48	Dis. of Lungs, &c.	8
		Teething	12
....	12	Dis. Stomach, &c.	10
aths ..	4	Dis. of Liver, &c.	17
halus ..	21	Childbirth	15
....	34	Dis. of Uterus, &c.	3
....	19		

—The total number of deaths was utumnal and 52 below the annual phus fever is the disease which is *'alent and fatal. In all the districts uth, the mortality was below the*

METEOROLOGICAL SUMMARY.

Mean Height of Barometer .... 30·24
„ „ Thermometer[a]............ 44·1
Self-registering do.[b] ...... max. 63· min. 29·
„ in the Thames water „ 0· „ 45·2

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was about 1° above the mean of the month (42·9°). The extreme hebdomadal range in the self-registering thermometer was 34°.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

FRIDAY, Nov. 20.—J. D. Ward.—W. H. Boutflower.—E. Paley.—J. Jones.—W. Hall.

NOTICES TO CORRESPONDENTS.

"A Subscriber to the Gazette from the beginning." — A complete course of Mr. Taylor's Lectures on Medical Jurisprudence will be published; but they can only appear at intervals. Dr. West has promised to furnish us with his course of Lectures at the commencement of the next summer session. We have not yet received for publication any of Dr. Day's promised Lectures on Animal Chemistry.

M.R.C.S.I., Brighton.—Our correspondent must permit us to attach his name to the communication which he has forwarded to us. We consider this to be necessary in all cases where ordinary practice is criticised, and new modes of treatment are suggested.

Dr. Camps's paper will be inserted in the following number.

We could not publish the letter of Dr. H. Davies without publishing extracts from the Notes of which he complains. This would necessarily lead to a controversy which we are anxious to avoid.

RECEIVED. — Mr. Parkin. — Medicus. — Dr. Wardell.

ERRATUM.—In reference to the report of the proceedings of the Medical and Chirurgical Society contained in our last number, p. 830, Dr. Watson has written as follows to correct a mistake in the report of his observations:— "I did not say 'that purulent matter, the result of peritonitis, was uncommon, whether in relation to children or adults'—but that the circumstance detailed in Dr. Aldis's paper, which had just been read, namely, the evacuation of such purulent matter *by a spontaneous opening* in the walls of the abdomen, was uncommon.—THOS. WATSON."

ERRATUM.—At page 888 of our last number, 1st col. 18 lines from bottom, *for* "graternal ashes," *read* fraternal ashes.

Just published, illustrated with numerous Engravings on Wood by Bagg, fcp. 8vo. cloth, 12s. 6d.

A MANUAL of MATERIA MEDICA and THERAPEUTICS. By J. F. ROYLE, M.D. F.R.S. Professor of Materia Medica and Therapeutics in King's College, London.

London: John Churchill Princes Street, Soho.

Just published, in one thick volume, the Third Edition with considerable additions, 8vo. cloth, 21s.

PRINCIPLES of HUMAN PHYSIOLOGY. By W. B. CARPENTER, M.D. F.R.S. With numerous Illustrations on Steel and Wood.

London: John Churchill, Princes Street, Soho.

Just published, 2d Edition, in 1 large volume, 8vo. price 21s. cloth lettered,

A PRACTICAL TREATISE on the DISEASES PECULIAR to WOMEN: illustrated by Cases derived from Hospital and Private Practice. By **Samuel Ashwell, M.D.** late Obstetric Physician and Lecturer to Guy's Hospital

London: Samuel Highley, 32, Fleet Street.

MEDICAL SOCIETY OF LONDON AND HOMŒOPATHY.

THE JOURNAL of HEALTH and DISEASE, December Number, will contain an Examination of Dr. Risdon Bennett's Statements.

Published Monthly, price 6d.; and sold by Sherwood and Co. 23, Paternoster Row.

Published This Day, in 1 vol. 8vo. with 10 Plates, 10s. 6d. cloth,

THE POTATOE PLANT: its Uses and Properties; together with the Cause of the present Malady, the Extension of that Disease to other Plants, the Question of Famine arising therefrom, and the best means of Averting that Calamity. By **Alfred Smee, F.R.S.** Surgeon to the Bank of England, to the Royal General Dispensary, to the Central London Ophthalmic Institution, and Lecturer on Surgery at the Aldersgate School of Medicine.

Longman, Brown, Green, and Longmans.

New Edition, fcp. price 10s. 6d.

DR. HOOPER'S PHYSICIAN'S VADE-MECUM; or, a Manual of the Principles and Practice of Physic. New Edition, considerably enlarged and improved, with an Outline of General Pathology and Therapeutics. By **William Augustus Guy, M.B.** Cantab. Professor of Forensic Medicine, King's College, London.

London: Henry Renshaw; Whittaker and Co.; S. Highley; Simpkin and Co.; Sherwood and Co.; John Churchill; Houlston and Co. Edinburgh: A. and C. Black; Maclachlan, Stewart, and Co.; Dublin: Fannin and Co.

A LADY, widow of an eminent medical man, residing in one of the most fashionable and favoured watering places on the Devonshire coast, would willingly receive under her care two or three YOUNG LADIES, for whom a winter or permanent residence in a mild and genial climate may be necessary, or to whom superior educational advantages might also be an object. Highly satisfactory references will be afforded in town and other parts of the kingdom. —Address to A. Z., care of Dr. Snow, 54, Frith Street, Soho Square.

Gratis, on application, or through a
seller, or prepaid for four penny sta

A CATALOLUE of
CHURCHILL'S PUBLICATI
MEDICINE, SURGERY, and SCIENC
Princes Street, Soho.

NOTICE.—Subscribers to CHI
SYSTEM of SURGERY, by South
nt ly requested to make up their Sets,
cmpletion of the publication during I
te work *will cease to be sold in Parts.*

London: Henry Renshaw, 356, Str

Just published, 8vo. price 10s. 6d. c

THE NATURE and TREAT
of GOUT. By W. H. Robertso
"We have read this treatise with m
rest, and we are sure that every one th
the volume will allow that it is not onl
with information brought down to th
period, and of a very practical chara
that it is conveyed in an agreeable and
ing manner. It is difficult to specify
part of the volume as more deserving
than another, for all are ably done."
Edin. Med. and Surg. J

London: John Churchill, Princes Stree

MEDICO-CHIRURGICAL TRANSAC
Just published, 8vo. with eleven plate
numerous woodcuts, price 16s. clo

MEDICO-CHIRURGI
TRANSACTIONS, published by t
Medical and Chirurgical Society of
Volume XXIX. Second Series.—Vol. X

Contents:—Dr. Johnson on the Min
tomy and Pathology of Bright's Diseas
Kidney—Dr. Warren's Case of Ligature
clavian Artery—Mr. Vincent's Cases of L
of Carotid Artery—Mr. Arnott's Case of
and Ligature of Posterior Tibial Arter
Paget's Case of imperfect Corpus Call
Mr. P. Hewett on Aneurism—Dr. Sp
Cyanosis—Mr. Rainey on Ganglionic C
of Arachnoid Membrane—Mr. Acton's
Monstrosity—Mr. Liston on Wounded A
&c.—Mr. Dixon's Case of Tumour of Fift
—Mr. Hutchinson on the Respiratory Fu
—Mr. Lowdell's Case of Hydatid Cy
Curling on Varicocele treated by Pressu
Busk's Case of Congenital Deficiency of
and of Abscess in the Neck communicatin
Aorta—Dr. Jackson on Derangement of St
of Spleen—Mr. Cumming on a Lumino
pearance of Human Eye—Mr. Toynbee
Intimate Structure of the Human Kidn
Thompson on Relation between Constit
Food and Systems of Animals.

Longman, Brown, Green, and Longm

NATIONAL INSTITUTE of MEDICINE, SURGERY, and MIDWIF
In the Advertisement in last Number it was erroneously stated that the Meeting of the
was appointed to take place on the 23d of December. *The day of Meeting is Wednesday*
2d of December. In the same advertisement, "Secretaries" is printed for "Scrutineers."

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Paris
Sepulchre, in the City of London, by Eliezer Chater Wilson, 57, Skinner Street af
Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the sa
by William Longman, of 36, Hyde Park Square, in the County of Middlesex, Bookselle
Friday, Nov. 27, 1846.

992.—Vol. XXXVIII.
[New Series, No. 84.]

Price {Unstamped, 8d.
Stamped.... 9d.

LONDON MEDICAL GAZETTE,
OR
Journal of Practical Medicine.

blished every
day Morning.

December 4, 1846.

Also in
Monthly Parts.

LECTURES.

Page
ses treated at the Westminster Hospital. Reported by Mr. F. Wildbore, M.R.C.S.L. House-Surgeon. With Clinical Remarks by B. Phillips, Esq. F.R.S. Assistant-Surgeon to the Hospital 955
Case of severe Injury to the Spine........ 955
Suppuration within the Coverings of the Spinal Cord 955

ORIGINAL COMMUNICATIONS.

Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery, as bearing upon the Treatment of Cardiac and Pulmonary Diseases. By Norman Chevers, M.D. With Engravings. Part VII. 961
Malformation by Excess of the Pulmonary Artery.............................. 961
n the Pathological Characters of the Blood as it exists in the Pyrexiæ. By William Camps, M.D. Edin. Physician to the Farringdon General Dispensary........ 968
servations on Two Forms of Dysmenorrhœa. By Henry Oldham, M.D. Physician-Accoucheur and Lecturer on Midwifery at Guy's Hospital. Part II. 970

LEADING ARTICLES.

n the Appointment of Medical Men to the Office of Coroner 976

REVIEWS.

smos: Sketch of a Physical Description of the Universe. By Alexander von Humboldt. Translated under the superintendence of Lieut.-Col. Edward Sabine, R.A. For. Sec. R.S. Vol. 1 978
e Health and Sickness of Town Populations considered with reference to proposed Sanitary Legislation 980
arantine and the Plague. By Gavin Milroy, M.D........................... 981
Medical Education. By W. A. Guy, M.B. Cantab. Professor of Forensic Medicine in King's College, &c. 981
e Economy of the Animal Kingdom, considered anatomically, physically, and philosophically. By Emanuel Swedenborg. Translated from the Latin, by the Rev. A. Clissold, M.A. Vols. 1 and 2.. 981

PROCEEDINGS OF SOCIETIES.

Page
Royal Medical and Chirurgical Society.—A Remarkable Case of Injury to the Eye. By James Dixon, Esq. Surgeon to the Royal London Ophthalmic Hospital.... 983
An Account of Two Labours of a Dwarf. By Henry Davies, M.D. 983
Case of Tumor in the Groin. By J. M. Arnott, F.R.S. Surgeon to the Middlesex Hospital.............................. 984
Medical Society of London.—Case of Gangrene of part of the Right Lung. By R. C. Golding, M.D. 986
Extensive Carcinomatous Disease........ 987
Westminster Medical Society.—Mr. Hird on the Pathology and Treatment of Croup . 988
South London Medical Society.—Mr. Searle on Serous Apoplexy.................... 989
Manchester Pathological Society.—Acute Endocarditis—Inflammatory Coagulum in left Auricle. By Dr. Watts........... 991
Cauliflower Disease of the Uterus. By Mr. Whitehead........................ 992
Conversion of large Muscles of Trunk, Neck, and Arms, into Bone. By Dr. Wilkinson. With Two Engravings.... 993
Aneurism of Ascending Aorta. By Dr. Cassels............................... 995

CORRESPONDENCE.

On Guttapercha Splints. By Alfred Smee, F.R.S. Surgeon to the Bank of England, and Lecturer on Surgery at the Aldersgate School of Medicine............... 996
Treatment of Diseases of the Skin.......... 996
On the Action of Camphor on the Teeth. By W. Herapath, Esq. of Bristol.......... 996

MEDICAL INTELLIGENCE.

Anniversary Meeting of the Royal Society.. 997
University of London.—List of Candidates who passed the Examination for the Degree of M.D........................ 997
University of Cambridge.—Thurston Speech 997
Middlesex Hospital 997
Westminster Hospital 997
Alleged Appearance of the Asiatic Cholera in Syria 997
The Measles at Antwerp.—Diminution of Zymotic Diseases in the Metropolis.... 998
Fever in Berkshire........................ 998
Rewards of Medical Services by the State.. 998

SELECTIONS FROM JOURNALS, ETC.

[*For* Advertisements, see next page.

Just published, fcp. 8vo. 12s. 6d. cloth,

A MANUAL of CHEMISTRY; with numerous Illustrations on Wood. By G. Fownes, Ph.D. F.R.S. Professor of Practical Chemistry in London University College.

"An admirable exposition of the present state of chemical science, simply and clearly written, and displaying a thorough practical knowledge of its details, as well as a profound acquaintance with its principles. The illustrations and the whole getting of the book merit our highest praise."

British and For. Medical Review.

London: John Churchill, Princes Street, Soho.

Lately published, fcp. 8vo. cloth, price 12s. 6d.

MANUAL of OPERATIVE SURGERY; based on Normal and Pathological Anatomy. By J. F. Malgaigne. Translated from the French, by Frederick Brittan, A.B. M.D. M.R.C.S.I. Illustrated by Wood Engravings.

"It is certainly one of the best books published on operative surgery; and we can conscientiously compliment the translator on his mode of performing it."—Edin. Monthly Med. Journ.

London: Henry Renshaw, 356, Strand.

On Monday, the 14th inst. will be published, in 1 vol. 8vo.

CLINICAL FACTS and REFLECTIONS; also, Remarks on the Impunity of Murder in some Cases of Presumed Insanity. By Thomas Mayo, M.D. F.R.S.; Fellow of the Royal College of Physicians, and late Fellow of Oriel College, Oxford.

Longman, Brown, Green, and Longmans.

THE DUBLIN EXAMINER, in ANATOMY, PHYSIOLOGY, SURGERY, PRACTICE of PHYSIC, &c. The Second Number was published on the First of December. Price 1s.

Contents.

Anatomy.—The Cerebral Sinuses—continued; the Arachnoid Membrane.

Physiology.—Bone.

Surgery.—Concussion; Compression; and Inflammation of the Brain.

Practice of Physic.—Chronic Changes in the Brain, including Ramollissement, Induration, Hypertrophy, Atrophy, Tumours, &c.; Acute Hydrocephalus.

The First Number was published on the 2d of November.

Contents.

Anatomy.—The Scalp; the Dura-mater; the Cerebral Sinuses.

Surgery.—Injuries of the Scalp; Erysipelas.

Practice of Physic.—Meningitis; Phrenitis; Apoplexy.

Dublin: Fannin and Co. Booksellers to the Royal College of Surgeons in Ireland. London: Longman & Co.; and H. Renshaw. Edinburgh: Maclachlan, Stewart, and Co.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."

Pharm. Journal, May 1846.

Prepared by Dinneford and Earland, [illegible] [illegible] Street, Chemist to Her Majesty the Queen Dowager, and H.R.H. the Duke of Cambridge, and sold by all respectable Chemists.

ST. GEORGE'S and ST. JAMES'S DISPENSARY.—The Office of Physician to this Institution being VACANT by the Resignation of Dr. Latham, Candidates, who must be Members of the Royal College of Physicians in London, are requested to attend the Committee, which will meet at No. 60, King Street, Golden Square, on Monday, the 7th inst., at [illegible] o'clock P.M. to receive Testimonials. The day of Election is Tuesday, the 15th instant, at 12 o'clock.

H. E. Nankivell, Sec.

60, King Street,
Dec. 1, 1846.

MEDICAL PRACTICE for SALE, in one of the largest Provincial Towns. It has been established upwards of Twenty Years, and is highly lucrative and respectable. It is to be sold in consequence of sudden illness, and the Name of the Advertiser may remain for a time if desired. A short Lease of the House is also to be taken with the Practice.—Apply, by letter only, to 217, Midland Counties Herald Office, Birmingham.

MEDICO-CHIRURGICAL TRANSACTIONS.

Just published, 8vo. with eleven plates and numerous woodcuts, price [illegible] cloth,

MEDICO-CHIRURGICAL TRANSACTIONS, published by the Royal Medical and Chirurgical Society of London. Volume XXIX. Second Series.—Vol. XI.

Contents:—Dr. Johnson on the Minute Anatomy and Pathology of Bright's Disease of the Kidney—Dr. Warren's Case of Ligature of Subclavian Artery—Mr. Vincent's Cases of Ligature of Carotid Artery—Mr. Arnott's Case of Wound and Ligature of Posterior Tibial Artery—Mr. Paget's Case of imperfect Corpus Callosum—Mr. P. Hewett on Aneurism—Dr. [illegible] on Cyanosis—Mr. Rainey on Ganglionic Character of Arachnoid Membrane—Mr. Acton's Case of Monstrosity—Mr. Liston on Wounded Arteries, &c.—Mr. Dixon's Case of Tumour of Fifth Nerve—Mr. Hutchinson on the Respiratory Functions—Mr. Lowdell's Case of Hydatid Cyst—Mr. Curling on Varicocele treated by Pressure—Mr. Busk's Case of Congenital Deficiency of Kidney and of Abscess in the Neck communicating with Aorta—Dr. Jackson on Derangement of Structure of Spleen—Mr. Cumming on a Luminous Appearance of Human Eye—Mr. Toynbee on the Intimate Structure of the Human Kidney—Dr. Thompson on Relation between Constituents of Food and Systems of Animals.

Longman, Brown, Green, and Longmans.

REFORM YOUR TAILORS' BILLS.

DOUDNEY AND SON, 49, LOMBARD STREE

ESTABLIS

Lectures.

CASES TREATED IN THE WESTMINSTER HOSPITAL.

REPORTED BY

MR. F. WILDBORE, M.R.C.S.L.

House-Surgeon; late House-Surgeon to the Lock and British Lying-in Hospitals.

Clinical Remarks by B. Phillips, Esq. F.R.S.

Assistant-Surgeon to the Hospital.

Cases of Severe Injury to the Spine.

WILLIAM GREGORY, a stone-mason, 31 years of age, was brought from the House of Lords on the 2d of December, 1845. It was stated that he had fallen from a scaffolding about 40 feet from the ground, and pitched on the side of his head and shoulder. When admitted he was perfectly sensible, but helpless; the pulse was a little irregular, and the countenance and respirations were natural. The power of motion of the lower extremities was entirely lost, and sensation nearly so; the upper extremities were unaffected, but he complained of a general soreness over the whole of the body. Nothing abnormal was detected on examining the spine.

3d.—The bladder is paralysed, and the sphincter ani is relaxed. He complains of pain around the epigastrium, as though a cord were tied round it. The pulse is feeble and the tongue clean.

8th.—He has now recovered the command of his sphincter ani, but he is unable to retain his urine. Up to this date a catheter has been passed two or three times a day.

15th.—He is slowly regaining a limited degree of motion in his legs, and there is less numbness of the surface. The bladder continues in the same condition, and the urine has a slight ammoniacal odour, which has been present since his admission. He complains of some pain and uneasiness in the cervical region on striking the vertebra prominens.—Empl. Lyttæ Mag. Nuchæ. Hydrarg. Chloridi, gr. iij. st. Haust. Sennæ postea.

20th.—He regains very slowly the motor power of the extremities; in other respects he is the same. The pulse is feeble, the tongue is clean, and the bowels are regular. He felt relief from the blister.—Rep. Empl. Lyttæ.

28th.—There is very little improvement since the last date; the most he can do with his legs is to draw up the knees very slightly. The blister over the tender vertebra has been again repeated, and is ordered to be kept open with an irritating ointment.

January 13th.—He can now control in some measure the incontinence of urine, and thinks that he feels more power in his limbs. The blister on the neck has healed, and the tenderness on percussion of the spine has lessened.

23d.—There is some increase of pain in vertebræ.—C. C. ad ℥vj. Nuchæ. Tinct. Lyttæ, ♏x.; Tinct. Ferri Muriat. ♏xv.; Aquæ Destillatæ, ℥j. ter die sumend.

Feb. 3d.—He is regaining the use of his limbs rapidly, and his general health is improving. The functions of the bladder and urethra are quite restored.—Rept. Mist.

12th.—With the aid of crutches he can get about the ward a little, but he states that he feels as though a heavy weight were placed on his shoulders. There is still a great loss of sensibility of the lower limbs.

On the 23d of Feb. he left the hospital to go into the country, walking tolerably well with the aid of two sticks, and suffering no other inconvenience than a sensation of cold and numbness from the toes to the knees, gradually diminishing towards the hips.

On the 31st of Sept. of the present year he presented himself at the hospital in a tolerably robust state of health. He stated that he suffered occasionally a slight pain in the vertebra prominens, and had entirely lost the sensation of the surface of his body from the toes to a line drawn around him above the crista ilii. He could not distinguish a hot from a cold body at any point below the ilium; above, that sensation was perfect. He was then about to resume his usual occupations.

Suppuration within the coverings of the spinal cord.

Charles Boore, a labouring man, 46 years of age, was admitted into the hospital on the 26th of August of the present year. He had a transverse fracture of the right femur about three inches above the condyles, and an oblique fracture of the tibia of the same side immediately above the internal malleolus. He complained of suffering very severe pain in the back, and had entirely lost the motor power of the lower limbs; the sensation was perfect. On proceeding to examine the back an angular curvature was discerned, which he stated was the result of injuries which he had received three years ago, and for which he was treated in another hospital. The 12th dorsal vertebra projected beyond the line of the others, and its spinous process was driven a little to the left of the median line. No recent displacement of the parts was detected. The back was much bruised, but there was no lesion of the surface. The suffering was so great that he could not assume the horizontal position; he was therefore supported by a bed-chair, and had

992.—XXXVIII. Dec. 4, 1846.

two short crutches, to place on ein each axilla, to take the weight of the upper part of the body off the injured portion of the spine. This gave him great relief. The limb was put up on an Amesbury's apparatus. The statement made by him was that he had fallen from a scaffolding with some large pieces of timber, and that one of these had struck him across the loins.

Vespere. — The bladder is paralysed; urine drawn off, pale, copious, and free from blood; the bowels are confined.—℞ Hyd. Chloridi, gr. iij.; Ext. Colocynth, gr. vij. st. sumend.

27th.—The pain in the loins is severe. The bowels have not yet acted. In the pulse there is nothing remarkable.—Ol. Ricini, ℥ss. st. sumend. C. C. ad ℥xij. lumbis.

28th.—He felt some relief from the cupping, and the bowels have acted. The bladder continues in the same condition. The pulse is quiet, and the tongue is quite clean.

29th.—The sphincter ani is now relaxed; in other respects he is the same.

31st. — The bowels are much purged. The digestive organs are unimpaired.—Mist. Cretæ c. ℥j.; Tinct. Opii, ♏x. post. sig. sed. sumendus.

Sept. 2d.—He can move this morning the uninjured limb a little; he slightly flexes the thigh on the pelvis, and rotates it to a slight extent. The sensation continues perfect; he readily feels the least touch on the sole of the foot. The bladder is still in the same paralytic condition; the sphincter ani is relaxed, but the bowels are less purged; the tongue is quite clean; the appetite and digestion good, and the pulse steady but feeble. Except on motion he says that he does not suffer pain in the back, merely feels weak. He cannot be persuaded to take the horizontal position. He prefers to be supported by a bed-chair and pillows, and to rest the weight of his upper extremities on the short crutches, in which position he feels easy.

6th. — The sensation of the surface is perfect, and he continues to move the sound limb to the same extent as on the 2d. He suffers now from incontinence of urine. In other respects he continues about the same, excepting that he is more debilitated.

9th.—The back is becoming sore.—To be placed on Earle's bedstead.

17th.—He is more debilitated, but beyond this there is no marked alteration; sensation and motion are about the same; probably the latter is a trifle more limited, but it seems rather to arise from muscular debility than want of nervous power. The least degree of motion causes the most agonising pain in the back; the appetite is good, and the tongue is clean.

20th. — This morning he had rather a severe rigor.

23d.—The debility increases, and the back is sloughing. He now lies quite powerless, and is unable to move to the slightest extent his lower limbs. The sensation is perfect. He takes large quantities of nourishment and stimuli with an appetite and a relish. The tongue continues clean, and although the motions pass without his knowledge, yet they are tolerably healthy, and of a fair consistency. The countenance is sunken and listless.

27th.—The *sensation continues perfect*, but *the motor power of lower limbs is entirely extinguished.* He says that he does not suffer pain, except on being moved; the agony then is intolerable. The incontinence of urine and fæces continues the same, and the sloughing of the nates goes on. The tongue is clean, and the appetite remains tolerably good.

He lingered on in this condition, gradually becoming more debilitated, until the 12th of October: he then died. The sensation remained perfect until the day before his death, when the delirium of dissolution set in; it was then almost impossible to determine precisely, but, as far as one could judge from having carefully watched him through the illness, sensation appeared to be present until consciousness was lost.

After death the spinal canal was laid open along its whole length. Up to the twelfth dorsal vertebra, the cord and its coverings were in a healthy state. From that point the canal itself and the contained organs had undergone great change. The bony parietes were dark coloured, and had all the appearance of incipient necrosis. There was a considerable irregularity in the canal at the level of the first lumbar vertebra, where there was a projection, apparently the result of the former injury. The coverings of the cord were strongly adherent to the bony surface from that point to the extremity of the canal. From the same point, the sheath of the cord was distended by purulent fluid, in which some flakes of lymph floated: it equally distended the sheath *anteriorly, posteriorly*, and *laterally*. The terminating portions of the cord were more than naturally vascular, but they did not seem to have undergone any other change. As regards the fractured thigh, there was no attempt at bony union whatever, nor was there any appearance of a provisional callus: it was a comminuted fracture extending into the joint, the synovial membrane of which was filled with a dark coloured and very offensive purulent deposit, precisely similar in character to that secreted by the sloughing almost, indeed, amounting to a state of caries.

The preceding cases belong to a class by no means uncommon in hospital practice. The accident which occurred in both cases was similar; the general results not unlike; but in one case sensation was completely extinguished, while motion was, to a certain extent, restored; in the other, motion was lost from the first, while sensation from first to last was comparatively unaffected, and it would be difficult to say in each case that the early symptoms were not the result of concussion.

I am tempted to make some remarks upon these cases, because the latter forms one of a series, which seems to raise a doubt of the correctness of the theory of the functions of the spinal nerves, as deduced mainly from experiment, but to some extent from pathological facts. At this moment I do not propose to do more than allude to some of the cases. Those who wish to consider them in detail may find most of them in Longet; others in Ollivier.

In the first place, it would seem that the original injury in Boore's case—that which occurred previous to the one for which he was admitted into the Westminster Hospital—produced symptoms similar to those which were present on the second occasion; that he recovered from them, and that they were aggravated only after the severe rigors, when it may be presumed suppuration took place within the sheath of the cord; after which the little power of motion left in the lower limbs was totally extinguished. Though the bones did present a certain amount of disease, and some displacement, it may be that the paralysis in this as well as in the former case was the result of severe concussion. In the case of Boore, our patient, the disease about the cord produced a loss of motor power—only, the sensibility was apparently unchanged, while no direct injury appears to have been done to the cord: the injury seemed to be confined to the bony canal; and the large quantity of purulent matter within the sheath was probably the consequence of the irritation set up in the membranes by the damaged bone. The sheath was distended throughout; equal pressure and equal irritation seemed to be directed upon all the nerves, and yet sensation of all the lower part of the body was unimpaired: motion was entirely lost.

Some people think that the motor power requires for its action a larger dose of nervous influence than sensation. Schæps and Meckel laid down this principle; and it was argued that the difference in volume of the anterior and posterior branches rested upon that fact. This idea seems to be supported by the successive decline *of the faculties,—the infirmities of age,—the stony or* impossibility of movement in certain fevers. A moribund person ceases to speak before he ceases to feel. In paralysis depending on cerebral hæmorrhage, the tongue is first affected; when cerebral congestion is slowly resolved, the return of sensibility precedes that of mobility. Mobilily suffers first in vertigo. Longet's observations shew that paralysis of motion is more frequently seen than that of sensation. In caries of the vertebræ, as the disease makes progress, and the degeneration and compression proceed, the paralysis of sensation usually follows that of motion. The exceptions to this rule are few. In any of the cases referred to by Longet, loss of sensation has not been completely associated with loss of motion. In Cherpin's case, the alteration of structure was exactly limited to the posterior cords; yet the symptoms were, incomplete paralysis of movement in the lower limbs, incontinence of urine and fæces, and complete loss of sensation in all the lower half of the body.

However nearly correct may have been many of the opinions entertained by the ancients on the functions of the central nervous system, it does not appear that they were supported by pathological facts or by experiment. Galen said: "Si ex anatomice nervorum ad singulas partes venientum principia didiceris facile earum et sensum et motum deperditum curabis." He knew that sometimes sensation alone was destroyed,—sometimes motion,—sometimes both; but he did not know the organic condition on which they depended. The moderns have resorted to both pathological facts and experiments for the determination of the question; but it is certain that there is an apparent want of concord in the evidence furnished by pathology and experiment.

Experiments have been made on brute animals for the purpose of determining whether it be possible to distinguish in the central nervous system special apparatus of sensation, intelligence, and motion; and the results of those experiments have served to convince many physiologists that, although with respect to the brain the conclusions are not satisfactory, with respect to the spinal cord and the nerves they are perfectly satisfactory. The experiments of Sir C. Bell, and those of Muller, do not, it is true, yield the same results as those of Magendie or those of Bellingeri.

Still, the general result is, to induce a belief in the opinion that the anterior nerves of the spine are directly concerned in motion; the posterior in sensation.

With respect to the brain, putting aside smaller points, it is generally admitted that pressure on one side of the organ, when sufficient, determines paralysis of the opposite lateral half of the body; though to this alleged law exceptions may be found in the cerebellum, where a clot of blood sometimes determines direct paralysis, and in the eye.

There are certain points, however, which do not appear to admit of much question: *e. g.* as to the nervous agent, it is, I apprehend, an incontestible law,—its value may be lessened by its generality,—that the cerebro-spinal system presides over sensation and motion: how the influence is exercised we will not stop to inquire.

Opinions, however, have gone further: desire has been felt to attain more precision. It is maintained, for instance, that there are particular points or regions from which each influence is derived; and, further, that those points are clearly made out. It has been sought to determine whether an isolated or simultaneous lesion of sensation and motion could be referred to distinct parts of the brain or spinal cord; and of these inquiries the best established result is, that in the paralysis of one lateral half of the body the organic cause will be found in the opposite side of the brain. But there are exceptions to this law.

Bayle mentions four exceptional cases of this kind; but attempts have been made to throw discredit upon them. However, when it is evident that the fact was regarded at the time as remarkable, it does not seem to me that they are less worthy of credit because they were made by persons in the condition of students: but even this drawback does not attach to the case of Brunner.

I am the less disposed to question the correctness of these observations, opposed as they are to general experience, because I apprehend, at all events, that the evidence of such phenomena in cases of chronic affection of the brain admits of no question. The cases mentioned by Lancisi, Morgagni, and those given by Bayle, as well as some more recent instances, are, I conceive, conclusive proofs that however well established may be the general law, exceptions to it do occur: and if that be true, it naturally raises the question of the so-called law, as well as the interpretation of it,—that pressure on one side of the brain is indicated by signs which exist on the opposite of the body.

Again, there are not wanting observations and statements as to the influence of particular points of the brain over mental phenomena.

What more generally admitted than the intimate connection, shall we say dependence, of the mind on the brain? and yet the Memoir of Lapeyronie demonstrates that the integrity of the intellectual faculties is conciliated with the lesion of every separate part of the brain.

I believe, then, that the symptoms of nervous disease existing during life do not reveal the exact seat of the material disorder in the brain. And with respect to the spinal cord, it does not appear to me that the functional attributes are so distinct, so special, that the exact pathological lesions may be revealed by the altered function.

Many experiments have been so conducted as to give us confidence in the results, but there is no absolute uniformity to be found even in the testimony of vivesectors as to the functions of the nervous centres. And there are unquestionably cases where diseased states would seem to contradict much that appeared to be best established by experiments made upon brute animals. What has become of the experiments of Haller on sensibility and insensibility? yet who doubted their correctness fifty years ago? It is clear, I think, that there are on record cases of disease of the spinal marrow which *appear* to contradict the best established principles of Bell and of Magendie.

Nothing connected with the functions of the spinal cord is regarded as better established than this, that an injury done to that organ, if sufficient, is followed by the abolition of sense and motion in all parts which are supplied with nerves from a lower point of the cord: in some cases the loss of sensibility only is observed, in others the motor power only is lost. And yet Portal observed a case of paralysis of the left arm, where an examination was had after death, and red softening was found at the lower extremity of the cord, no lesion being apparent higher up. Brera describes the case of a soldier who died with general paralysis; after death it was found that there was softening of the inferior extremity of the spinal cord only.

In Longet's case (No. 5) a lesion of the anterior part of the cervical portion of the cord did not produce any loss of sensation or motion of the upper extremities; it determined loss of motion in the lower extremities, the sensibility remaining unchanged.

Lafontaine's case is the second cited by Longet: he had complete loss of power in the right lower extremity, incomplete in the arm of the same side. The sensibility was unchanged.

The wound had extended between two vertebræ into the posterior wall of the pharynx, passing through the spinal cord. The diagnosis was that the instrument had passed through the right antero-lateral column of the cord. Now, in this case, the first thing experienced was a numbness of the right side, a dragging heavy feeling in the arm and pricking in the hand. This case supports the experiments

There were moments, however, and they were many, when he could move them voluntarily. After death it was ascertained that there was softening of the anterior columns of the cord in nearly their whole thickness and length, even up to the cerebellum: why was not the paralysis more than intermittent? Ollivier mentions a case where there was total loss of the motor power alone in the lower extremities, after a fall. Here we might naturally expect to find the anterior columns injured, but the *whole cord* was softened at the level of the twelfth dorsal vertebra. He mentions another case where a man hurt his back: it was followed by total loss of motor power in the lower extremities, and incomplete loss of sensibility, which ought to represent considerable change in the anterior columns, less in the posterior. The cord was crushed and softened in its entire thickness to the extent of an inch in the neighbourhood of the last dorsal vertebra. Another case from the same collection of cases:—A man died with total loss of motion of the lower extremities, partial loss of power of the upper extremities. It might be expected that there would be found decided mischief of the anterior portion of the cord low down, less marked in the upper portion. There was a semi-fluid softening of the entire lumbar enlargement of the cord, while there was no loss of sensibility below, and induration of the whole thickness of the cord from the eighth dorsal vertebra to the cerebral peduncles.

Another case described by Velpeau. A boy of seven years of age died with the symptoms of chronic bronchitis. After death masses of encephaloid structure were found in the inferior and posterior portions of the cerebellum. They pressed the cord upwards and backwards: portions of the medulla oblongata were altered in structure, having assumed an encephaloid character. There was no paralysis, no disturbance in the equilibrium, although the cerebellum was so greatly compromised. A man died with strangulation and softening of the spinal cord, caused by enlargement of the axis. There was also similar disease of the cord, extending from the sixth cervical to the second dorsal vertebra; and another similar condition, extending from the seventh dorsal vertebral to the lumbar enlargement of the cord, where it was semi-fluid. Now what were the symptoms? The neck and the chest were numb down to the third rib; so were also the upper extremities and a part of the trunk up to the epigastrium. Between the third and the seventh rib the sensibility was intact round the chest. How are we to explain the circumstance that the disease of the upper part of the cord was *sufficient to alter the sensibility of the upper portions of the body*, but not sufficient to affect the parts between the third and seventh ribs?

A man died with congestion of the cerebro-spinal system, but with remarkable softening of the cord to the extent of two inches about the brachial enlargement of the organ. What were the symptoms? Paralysis of the upper extremities, but none of the lower.

Dufort died with softening and disorganization of the cord about the level of the odontoid process, which had become loose, and ruptured the medulla oblongata; it may have been after death. There was also rupture of the motores oculorum, pneumogastric, and glosso-pharyngeal nerves, and injury to the facial, auditory, and hypoglossal nerves. The symptoms were acute pain in the skin and deeper tissues of the neck. Twelve hours before death, incomplete paralysis of the elevator muscles of the jaw.

A man died with paralysis of movement of the upper extremities, but without any paralysis of the lower. The cord was semi-fluid between the fourth cervical and fourth dorsal vertebræ.

Rippert was wounded by a ball, which passed through the lungs and the tenth dorsal vertebra; he made water, and moved about without convulsions, until he died. The spinal marrow was cut through about the tenth or eleventh dorsal spine. Desault felt that the case overturned all the existing doctrines.

A scrofulous child died without any species of paralysis, and yet, upon examination after death, a complete interruption of the spinal cord was found between the ninth dorsal and first lumbar vertebræ.

A man died without any appreciable paralysis, and yet the inferior half of the lumbar enlargement of the cord was found softened and destroyed. (Archives.)

A man of 30 died without paralysis. After death, no trace was discovered of spinal cord from the tenth dorsal spine, all that remained being diffluent. (Archives.)

Petronelli mentions a case where a man died of fever on the eighth day, with cramps of the thighs and legs. He had been to the water-closet a few hours before. The spinal cord was found to be interrupted to the extent of an inch and a half about the sixth dorsal spine.

The preceding cases do not, I apprehend, strictly accord with the prevailing notions of the functions of the cerebro-spinal system; in some respects they seem in opposition to them: and no doubt, if the spine were more frequently examined, their number would be greatly increased.

If we admit that direct experiments upon brute animals have, to a certain extent, determined that the anterior roots of the spinal nerves preside over movement, and that the posterior roots are mainly occupied by sensation, it cannot be denied that some of the preceding pathological facts seem to be almost in direct opposition to those experiments. It may be, however, that the apparent differences are reconcileable. We know, for instance, that a complete section of the spinal cord determines a loss of sensation and motion in those parts which derive their nerves at a lower point. We know that the section of the anterior roots more or less completely destroys the power of motion in those parts to which the nerve is distributed, and that the section of the posterior root destroys sensation. But we know, also, that certain experiments and pathological facts seem to leave these questions in doubt: but do they really confirm those propositions? The question at last is, how far do these cases confirm the law which experiment establishes. Certainly the belief of most physiologists is, that lesions having the same seat always determine the same results; that any differences which may be apparent are owing to conditions which have escaped the observers. Supposing that to be so, it is clear that if pathological changes were well limited, pathology would be a surer means of determining uses than direct experiment, accompanied, as it usually is, by violence, could be. It is true that the pathological experiment is rarely simple, and the symptoms are therefore complex. Of more than 350 cases collected by Longet, there were very few in which the lesion was confined to the particular roots, and there is this striking difference between lesions of the brain and spinal systems, that while in the first, where hemiplegia is caused by cerebral hæmorrhage, motion may be interested to the exclusion of sensation, in paraplegia both are affected.

How far these apparently exceptional cases are capable of raising a doubt as to the soundness of the rule to which we have referred, is the matter for our consideration. It is said, for instance, that a system must be capacious enough to include every observation, and that if there be a single deviation, a single exceptional fact, the system must fall. It may be that the so-called laws which it is said regulate this nervous system should not be regarded as a great system, but as general propositions not yet sufficiently advanced to be constituted into a system. The important question for us is to inquire what is the value of the exceptional facts; they may be exceptional in appearance only, they may be exceptional in reality. All that I seek to do is to call attention to the fact that at the present moment pathological evidence is not, as some persons seem to suppose, entirely favourable to those theories of the functions of the nervous system which are regarded as best established by direct experiments.

CASE OF PHAGEDÆNIC ULCERATION OF THE GENITALS.

DR. CRAWFORD, in the first number of the *British American Journal*, relates a case under this title, which is remarkable, as the patient was not the subject of syphilis, and had taken no mercury.

The patient, a married man, æt. 38, of very intemperate habits, which his occupation of a tavern-keeper afforded him facilities for indulging in, was attacked in October last with delirium tremens for the third time. He obstinately refused to take medicine, and after some fruitless visits Dr. Crawford discontinued his attendance. Shortly afterwards he was summoned in a hurry, in consequence of a serious hæmorrhage from the genitals having occurred, which was supposed to be the result of a wound inflicted by the patient upon himself. On examination, a blue ecchymotic spot was seen on the side of the prepuce, as if he had pinched the part. Cold applications were ordered, but were not very efficaciously applied, as the patient could not be kept in bed, and would scarcely even permit an occasional inspection. "Becoming, however, alarmed, from being now debilitated, he submitted to be treated, when a considerable portion of the prepuce was found to have been destroyed by a phagedenic ulcer, having a bloody clot adhering loosely to it." The ulcer was touched with a strong solution of nitrate of silver, and a carrot poultice applied; a cathartic was administered, followed by tartar-emetic and opium in camphor mixture, with a "stomachic, composed of tincture of ginger, tincture of cinchona, tincture of gentian, and carbonate of ammonia." Under this treatment he recovered speedily, but the whole prepuce was removed by ulceration, and "a superficial ulcer which had appeared on the side of the glans opposite to where the phagedena commenced, healed also, leaving a depressed cicatrix." Dr. Crawford, in his observations upon this case, remarks, that in all the cases of phagedena of the genitals which he has met with, the primary sore could be traced to a venereal origin. In the present instance, however, no suspicion of the kind could be entertained, nor could any cause be assigned for its origin, except the peculiarly excitable and irritable state of the constitution. In conclusion, he notices the advantage which was derived from the application of the powdered nitrate of silver in a case of phagedænic ulcer, in pre-

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.

By Norman Chevers, M.D.

[Continued from p. 835.]

MALFORMATION BY EXCESS OF THE PULMONARY ARTERY *(continued).*

Permanence of the arterial duct.

In a previous essay* I have endeavoured to trace out the principal causes which occasionally determine the non-closure of the arterial canal subsequently to birth; and have also attempted to afford some elucidation of the means by which the natural obliteration of this vessel is effected in the healthy infant: it now remains to analyse and classify the great variety of instances of congenital malformation of the heart and its large vessels in which permanence of the arterial duct constitutes the leading feature in the malformation; and it is certainly extremely interesting to observe how many different forms of congenital obstruction are attended with this condition: and to remark the singular diversity of lesions, the ill effects of which are, to a greater or less degree, mitigated by its establishment.

The following are the principal conditions under which non-occlusion of the arterial canal has been found to occur:—(1.) Where the duct occupies an unusual position; (2.) Where the orifice of the pulmonary artery is obliterated or congenitally narrowed; (3.) Where the aorta arises from the right ventricle and the pulmonary artery from the left; (4.) Where the orifice of the aorta is closed; (5.) Where the upper portion of the descending thoracic aorta is contracted or obliterated; (6.) Where the foramen ovale becomes closed previously to birth.

It has been very justly considered that the existence of any permanent cause of embarrassment to the circulation, similar to those which are present in most of the above-mentioned kinds of malformation, is sufficient to determine the non-closure of the arterial canal subsequently to birth; but it is also probable that various other circumstances, such as the existence of some severe, but temporary, cause of obstruction in any portion of the vascular circle of the child either before or after its birth, a diseased condition of the tissues of the canal, or a failure in the operation of those means by which the natural closure of the duct is usually effected, may determine its persistence, as a direct communication between the pulmonary and systemic trunks, throughout the entire life of the individual. To complete the series of instances where non-occlusion of the duct has been observed, we must add those in which it is associated with (7) imperfection of the ventricular septum, and with (8) an unclosed state of the foramen ovale; together with those (9) in which there is not discoverable any other appearance of malformation or defect in the heart or its appendages.

I have already adduced cases in illustration of several of these kinds of congenital aberration: the following interesting examples will assist to complete the series.

I. *Cases in which the arterial canal occupies an unusual situation.*

Failure of the process by which the duct becomes materially closed is not by any means invariably determined in cases where this vessel is irregularly distributed, but it is very remarkable that, in by far the larger number of instances where any deviation from its usual course has been observed, the canal has remained in a pervious condition. The following example is, I believe, unique.

The arterial duct arising from the right ventricle.

Wrisberg* refers to the case of a girl, æt. 7 years, in whom the *ductus arteriosus*, which was as large as it usually is soon after birth, arose from the right ventricle close to the orifice of the pulmonary artery. In this manner the aorta received blood from both ventricles.

Communication between the pulmonary and subclavian arteries, associated with other congenital defects in the heart or its appendages, independently of contraction of the pulmonary orifice.

I have already cited (pp. 283, 374, 452) instances in which an obstructed condition of the arterial outlet of the heart was in some measure compensated by the existence of an abnormal communication between the pulmonary trunk and the left subclavian artery, adopting the view of Dr. Paget, that, in these cases, the irregularly disposed arterial canal is not in reality the ductus arteriosus, but the remains of a communication which, during the earlier period of fœtal life, naturally exists between those portions of the branchial apparatus which afterwards form the right and left pulmonary and subclavian arteries. The following remarkable case has been cited by Dr. Paget, and appears to afford unquestionable evidence of the correctness of his view.

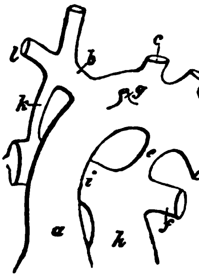
---

* On Permanence of the Ductus Arteriosus; and Constriction *of the Thoracic Aorta*; and on *the means by which the Duct becomes* naturally *closed*, Medical Gazette, vol. xxxvi. p. 187.

* In Gottingische Anzeigen, 1778, Num. 58; and Sandifort, Obs. Anatom. Pathol. t. iii. c. i. p. 39.

The pulmonary artery communicating with the aorta in the usual position of the canalis arteriosus; a vessel at the same time uniting the left branch of the pulmonary with the innominata artery. M. G. Breschet describes* the case of a male infant which lived 6 weeks, and during the brief period of its existence suffered from difficulty of breathing, attacks of vomiting and convulsion, and an habitual drowsiness, with coldness of the extreme parts of the body. On examination, the heart, which was of ordinary size, was found to be situated in the median line of the thorax, its point being directed to the left. It had but one auricle and one ventricle, which communicated by so large an opening that the organ might be considered to consist only of a single cavity. The aorta (*a*) arose in front and to the right, and gave off from the upper part of its arch (which passed to the left) the brachio-cephalic (*b*) and left carotid and subclavian arteries (*c*, *d*), and at its under part received (*e*) a large vessel (the arterial duct), which M. Breschet describes as arising from the left branch (*f*) of the pulmonary artery. A small branch (*g*) was also distributed from the anterior part of the arch to the thymus gland. Further behind the aorta, and to its left, arose (*h*) the pulmonary artery. Between the right branch (*i*) of this vessel and the brachio-cephalic trunk there existed a communicating vessel (*k*), which was larger and narrower than the arterial duct, and which was inserted just at the root of the right subclavian artery (*l*).

FIG. 1.



I am not acquainted with any other instance in which two direct communications existed between the pulmonary artery and systemic vessels in the form of a ductus arteriosus and a branchial canal. M. Breschet's case also forms a remarkable exception to the rule which I believe generally obtains—that, where there is total deficiency of the ventricular septum of the heart, the arterial duct is absent.

A single branchial canal uniting the pulmonary with the left subclavian artery.

One of the earliest recorded instances of the existence of a branchial duct, is that mentioned by John Christian Reinmann.* In the body of a beggar, who had died of suffocative catarrh, this author found an arterial canal ascending from the pulmonary artery and uniting with the left subclavian.

Dr. James Jackson has detailed the history of a female child, ætat. 5 years, whose death was principally due to the effects of an acute gastro-enteritic attack of five days' duration. She lay quiet during nearly the whole of her last illness, and was disposed to stupor. The countenance "was not very morbid," and was of a good colour; the respiration was most uncommonly accelerated, and was peculiarly irregular; the action of the heart was rapid, troubled, and confused; the palpitation of the heart, and shortness and rapidity of respiration had long and often been noticed by those about the child. These symptoms had been increased by exercise. The child was always unwilling to go upstairs; she always went up slowly, and often begged to be carried up. She had not, however, been subject to such paroxysms of dyspnœa as seemed to those about her to constitute disease. It was not remembered that her countenance or extremities had ever been livid, or even otherwise than fair and florid. Her death was rather sudden. The mucous membrane of the entire alimentary canal was found to present marked traces of intense inflammation; the lungs were natural; the pericardium contained more fluid than is usual; the heart was uncommonly large; the auricles were very greatly distended; the *pulmonary artery* was much larger and more prominent than the aorta: it formed a small arch, and divided into two branches immediately as it began to descend, after having made its curvature. These branches went to the lungs as usual; but the left, which was the larger of the two, distributed *a small branch to the left subclavian*. The aorta arose almost perpendicularly from the heart, passing to the right of the arch of the pulmonary artery, and, after ascending rather more than two inches, it divided into two branches, which immediately subdivided into the carotids and subclavians.† The

---

* Mémoire sur l'Ectopie du Cœur, p. 9.

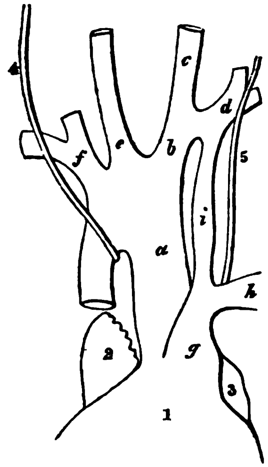
* Nova Acta Acad. Nat. Cur. T. i. Obs. 74, p. 302.

† The obscure wording of this description, and

foramen ovale had not closed, and there was an *opening between the ventricles* large enough to admit the passage of a finger.*

Otto Bernhard has described the case of an infant which died very shortly after birth, in which the viscera of the chest and abdomen were generally normal, and the body of the heart was naturally formed; but the aorta (*a*) presented a singular aberration: it first ascended perpendicularly to the region of the fourth or third dorsal vertebra, and then turned to the right; so that, above the right bronchus, it formed its arch, which was directed to the right; then, curving behind the right bronchus, it descended on the right side of the spine. The truncus anonymus (*b*), which was the first vessel given off on the left side of the arch, separated into the left carotid (*c*) and subclavian (*d*). The right carotid (*e*) and subclavian (*f*) arose by separate orifices from the right portion of the arch. The *pulmonary artery* (*g*) was naturally formed, and divided into its two branches, of which the left (*h*) passed directly to the left lung, and the right (not represented in Bernhard's figure) entered the right lung, after having curved behind the ascending aorta, and in front of the right bronchus and descending aorta. The *ductus arteriosus* (*branchial canal*) (*i*) arose from the pulmonary artery rather from its left branch: it was still pervious, and longer than common, and entered the left subclavian artery (*d*) at the distance of a few lines beyond the separation of that vessel from the innominata trunk.*

FIG. 2.



1, Upper portion of the heart.
2, 3, Auricles.
4, 5, Right and left vagi nerves.

These, with the instances by MM. Obet and Holst, already quoted, are the only cases with which I am acquainted where an abnormal communication existed between the pulmonary and subclavian or innominata arteries; but cases have been related in which the vestige of a communication of this kind was found uniting the vessels in the form of an impervious cord.†

II.—*The cases in which permanence of the arterial duct attends closure or contraction of the pulmonary orifice* have been discussed in previous sections (pp. 280 and 372), and those in which—

III.—*Transposition of the aorta and pulmonary artery is attended with a similar condition*, will be noticed in a subsequent chapter.

IV.—*Patency of the arterial duct associated with closure of the orifice of the aorta.*

Professor Tiedemann cites a case in which

---

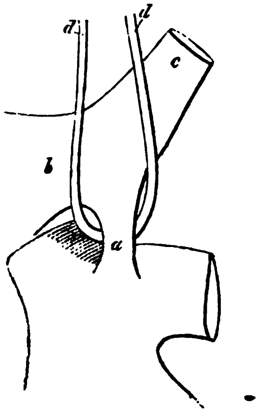
the absence of any allusion to the descending portion of the aorta, leaves the true nature of the malformation in the systemic trunk a matter of considerable doubt.

* London Med. and Phys. Jour. vol. xxxiv. pp. 100-2.

* De Arteriarum e Corde Prodeuntium Aberrationibus, p. 14. Berolini, 1813.

† In his splendid work on the Surgical Anatomy of the Human Body, Mr. Quain has given representations of a preparation in Guy's Museum, where the closed remains of a *branchial duct* passes upwards to a pouch in the aorta, from which the left subclavian artery takes its origin (p. 20, figs. 8 and 9). In a case related by Fiorati and Sandifort (and figured by Quain, pl. 7, figs. 1 and 1 b), besides other remarkable abnormal arrangements in the arch of the aorta, an *arterial ligament* (*a*) was found attached to a small pouch (*b*) from the descending arch of the aorta. The left subclavian artery (*c*) arose from this pouch in close approximation to the remains of the canal. The remarkable arrangement of the pneumogastric and recurrent nerve (*d d*) around the remains of this obliterated canal, as compared with the distribution of the left vagus in Bernhard's case, where the canal remained pervious, deserves to be noticed as a point of great physiological interest.

FIG. 3.



E. L. R. Romberg found in the body of an exposed child, who had breathed with difficulty, who was blue in the face, and died on the fourth day after birth, the cavities of the right side of the heart enlarged, their walls thickened, and the left auricle and ventricle very small, and *no trace of aortic orifice;* the *foramen ovale* wide open, and its valve directed to the right auricle; the *pulmonary artery* giving branches to the lungs, and then sending the *ductus arteriosus* to the aorta. From the arch arose the carotid and subclavian arteries. There was therefore a congenital closure of the origin of the aorta, and beyond this the aorta must have received blood from the pulmonary artery.* A remarkable degree of congenital arctation of the aortic orifice has frequently been noticed in cases where the arterial duct has become perfectly closed; and, although I have met with two instances in which an open state of the canal was attended with a very diseased condition of the aortic sygmoids, I am not acquainted with any example where non-closure of the duct could be satisfactorily traced to this cause; but the possibility of the occurrence of such a result can scarcely be denied.

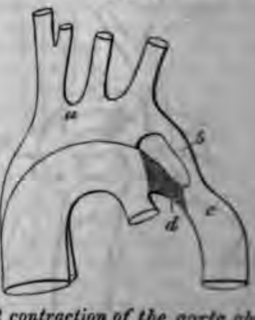
V. *Patency of the duct, associated with contraction or obliteration of the aorta distal to the left subclavian artery.*

In a previous essay† I have given notes of most of the recorded instances in which a more or less free communication has existed through the arterial canal where the aorta is (1) *constricted or closed immediately above the orifice of the duct; (2) where it is constricted opposite to the opening of the duct, and* (3) *where the artery is contracted both above and below the aortic end of the canal.* In none of these cases with which I am acquainted has the communication between the pulmonary and systemic vessels been more than two or three lines in diameter; and, in the majority of examples, the duct has been found of very inconsiderable size: but there is another class of instances, closely allied to these, in which the aorta having become greatly contracted or obliterated distal to the left subclavian artery, the arterial canal forms so wide a communication between the pulmonary and systemic trunks, that the descending aorta appears to be partially or wholly distributed by the pulmonary artery. The three following cases afford remarkably good illustrations of different modifications of this species of malformation.

Contraction of the aorta distal to the left subclavian artery. The arterial duct patent in such a manner as to give the descending thoracic aorta an appearance of being distributed equally by the arch of the aorta and by the pulmonary artery. Dr. Farre relates* the case of a male infant, who, during the first fortnight of his life, appeared like other children, but, after that period, breathed very quickly and began to waste. The skin was always *extremely pale*, and the extremities cold. Œdematous swelling of the legs, and sometimes of the face, took place. The functions of the stomach and bowels were imperfectly performed. He died suddenly, without convulsion, at the age of 8 months. On examination, Sir A. Cooper (in whose collection the heart was preserved), found the the chest was prominent and rounded: the pericardium and each of the pleural cavities contained serum. The heart was large and square; the *foramen ovale* was dilated; the *pulmonary artery* was larger than the aorta, and *arose from both ventricles*, but chiefly from the right. It is described that the ascending aorta (*a*) branched into the arteria innominata, left carotid, and left subclavian arteries, and then dwindled into a small vessel (*b*), which terminated in the descending aorta (*c*); the latter arose as a branch of the pulmonary artery in the situation of the *ductus arteriosus* (*d*). Having received the branch from the ascending aorta, it gradually dilated to its proper size.

The subjoined diagram from Dr. Farr's plate (fig. 10) will give a fair idea of the nature of the malformation. In this, as well as in the two following diagrams, I have defined, by a darker shade, that portion of the vessel which appears to me to represent the pervious arterial duct.

FIG. 4.



Great contraction of the aorta above and below the origin of the left subclavian artery: a wide communication by the arterial duct between the pulmonary artery and the descending aorta, giving the latter vessel an appearance of being distributed by the former.

---

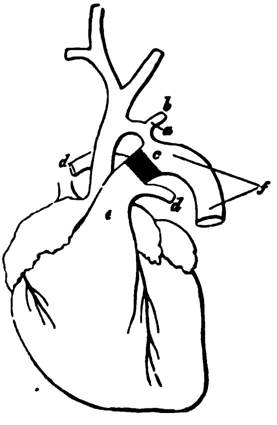
* As quoted from F. Tiedemann's "Von der Verengung und Schliessung der Pulsadern in Krankheiten," in Edinburgh Med. and Surg. Journal for July 1846, p. 149.

† MEDICAL GAZETTE, vol. xxxvi. p. 168.

describes the condition of a female infant which appears to have been born dead. It was the subject of a large ventral hernia, and presented several other remarkable deviations in the form and position of its viscera. The heart lay partly in the chest and partly in the abdomen, and could be seen projecting below the sternum under the abdominal integuments. The cartilaginous margins of the false ribs on the right side were hollowed out, forming a considerable concavity for its reception. Mr. Barret describes the condition of the great vessels as follows:—"The pulmonary artery was very large: it not only divided into its right and left branches, but proceeded upwards, forming a large arch; it then descended, occupied the usual situation of the [descending] aorta, and gave off the arteries to the trunk and lower extremities according to the usual distribution of the aorta. The ductus arteriosus arose from the upper part of this anomalous arch; and from the very centre of the ductus arteriosus was given off the left subclavian artery. The [ascending] aorta proceeded almost in a straight direction upwards, and, shortly after its junction with the ductus arteriosus, it divided into two branches—the arteria innominata, and the left carotid; and these were all its branches." * The condition of the ventricular septum of the heart is not mentioned.

After examining Mr. Barrett's very beautiful sketch, which the subjoined outline is copied, I am inclined to adopt a somewhat different view with regard to the arrangement of the vessels from that advanced by the author. It appears to me that the narrow canal (*a*) is not the arterial duct giving origin to the left subclavian artery (*b*), but the descending portion of the arch of the aorta, much contracted. That portion (*c*) of the pulmonary artery which lies between the origins of the right and left pulmonary branches (*dd*) and the upper part of the descending arch of the aorta (*a*) is evidently the *canalis arteriosus*, the great width of which renders the pulmonary artery (*e*) perfectly continuous with the vertebral portion (*f*) of the descending thoracic aorta.

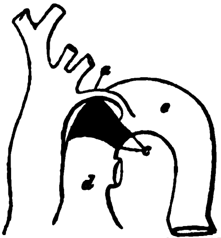
FIG. 5†.



Obliteration of the aorta distal to the left subclavian; the arterial duct patent; the pulmonary artery forming a continuous trunk with the descending thoracic aorta. The following case was communicated to Dr. Farr by Sir Astley Cooper*. A male infant, whose mother had previously given birth to children the subjects of cardiac malformation, died in convulsions 2 days subsequently to its birth, having suffered from dyspnœa and cyanosis. The heart was found to be larger and thicker than natural. The *ventricles communicated* by an opening in the septum. The *pulmonary artery* arose from the right ventricle, and formed the aorta descendens, besides giving off its usual branches to the lungs. The ascending aorta arose naturally, but, passing upwards, terminated in forming the innominata, left carotid, and left subclavian arteries, and a very small branch, which was pervious only in a part of its course, to the descending aorta. The air-cells of the lungs did not appear to be completely filled with air.

Upon examining the subjoined diagram (which is taken from Dr. Farre's plate), the small partially-closed vessel (*a*) in which the ascending aorta appears to terminate, resembles, at the first glance, the remains of a ductus arteriosus; but it is in reality the trunk of the aorta, rendered impervious immediately distal to the left subclavian artery, while the continuation of the canal is formed by the wide arterial duct (*c*) which unites the pulmonary artery (*d*) with that portion (*e*) of the descending aorta which is situated immediately below the point of obliteration.

FIG. 6.



---

* Lancet, 1844-5, vol. i. p. 349.

† In the above cut (fig. 5) the letter *(a)* has been accidentally attached to the left subclavian artery instead of the narrowed portion of aorta from which that vessel springs.

* Op. cit. p. 12.

The first and third of these cases are good examples of a rare form of congenital malformation, namely, *the origin of the pulmonary artery from both ventricles.*

Other examples of this remarkable condition of permanence of the arterial canal consequent upon obliteration or contraction of the upper part of the descending aortic arch have been recorded.

Steidelle* has related a case where the aorta and *pulmonary artery* arising as usual, the aorta was entirely distributed to the head and upper extremities; while the pulmonary artery, after giving off two branches to the lungs, continued as the descending aorta without any communication with the ascending aorta. The explanations of the above cases will apply to this, which was evidently also an instance of obliteration of the aorta between the origin of the left subclavian artery and the orifice of the arterial duct.

Otto found the left subclavian artery and descending aorta given off at the separation of the pulmonary branches in a child with phrenic rupture, deficiency of a finger, &c. (Breslau Museum, No. 8025.) In this case the obliteration or contraction of the aorta must have occurred between the origins of the left carotid and subclavian arteries. I have more than once seen the aorta remarkably contracted at this spot. A narrowing of this kind is well displayed in a specimen placed by Mr. W. Muriel in the Museum at Guy's Hospital, and represented in the Guy's Hospital Reports, (Vol. vii. p. 453.) A similar contraction will also be observed in the heart represented by Mr. Barrett (fig. 5 of this chapter). Otto also found the left carotid, subclavian, and descending aorta, similarly distributed in one of the hearts of a double monster of a sheep (No. 8020, Breslau Museum). Here the obstruction in the main systemic trunk must have occurred anterior to the left carotid artery.

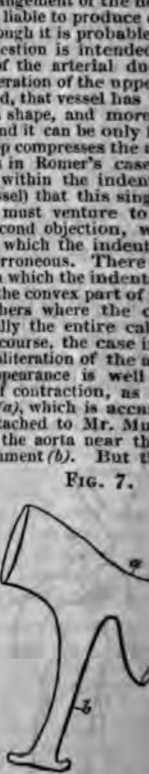
In my previous essay on the ductus arteriosus, I have attempted to afford some explanation of the causes which determine the occurrence of arctation and obliteration of the arch of the aorta at a short distance above, opposite to, or immediately below, the insertion of the arterial duct, and shall therefore do little more at present than allude to the great pathological interest of this question.† I think it cannot be doubted that, in nearly the whole of the above instances, the obliteration or contraction of the aorta, and the consequent alterations in the course of the circulation, must have been established during the period of intra-uterine life.

---

* Quoted by Hein, Paget, and Otto, from Sammlung, Chirur. Beobacht. v. ii. p. 114, 1778.

† I cannot, however, allow this opportunity to pass without replying to certain objections which have been raised by the author of a very able review of Professor Tiedemann's work on Obliteration and Closure of the Arteries in Diseases, in the Edinburgh Medical and Surgical Journal for January 1846, p. 154, against my conjecture that contraction and obliteration of the aorta may be produced by the loop formed by the pneumogastric and left recurrent laryngeal nerves which encloses the arch of the aorta, at the parts where arrangement which I am also disposed to consider as mainly instrumental in producing the natural closure of the arterial duct. In allusion to this suggestion, the reviewer observes—"But this seems inadequate to account for the occurrence, if we remember that the recurrent nerve winds round the aorta in every case, whereas this accident occurs in a very small proportion of the human species; and if we further remember that the indentation of compression is deepest in the convex part of the aorta, whereas the recurrent nerve in its enclosure of the arch touches only the concave part of the artery." In answer to the first of these objections I must state that I never attempted to maintain that the *natural* arrangement of the nervous loop around the aorta is liable to produce constriction of this vessel, although it is probable that the arrangement in question is intended to effect the obliteration of the arterial duct. In every case where obliteration of the upper part of the aorta has occurred, that vessel has been found greatly distorted in shape, and more or less changed in position; and it can be only in cases where the nervous loop compresses the aorta in an unusual manner (as in Romer's case, where the nerve was found within the indentation of the constricted vessel) that this singular lesion is produced. I must venture to state that the reviewer's second objection, with regard to the position at which the indentation is deepest, is decidedly erroneous. There are, undoubtedly, instances in which the indentation is principally marked at the convex part of the aorta, but there are also others where the constriction affects nearly equally the entire calibre of the vessel; this is, of course, the case in every instance of complete obliteration of the artery at this spot, and the appearance is well marked in many instances of contraction, as shown in the subjoined cut *(a)*, which is accurately copied from the plate attached to Mr. Muriel's case of contraction of the aorta near the insertion of the arterial ligament *(b)*. But there is still a third class of instances, in which the constriction is *wholly confined to the spot at which the recurrent nerve winds around the concavity of the aorta.* This is remarkably well displayed in a specimen preserved in Guy's Museum, and numbered 1450^{70}. It may be argued that the nervous loop is *immediately* in contact with the aorta

FIG. 7.



VI.—*Non-obliteration of the arterial duct in cases where the foramen ovale is closed previously to birth.*

In the few cases where the occurrence of obliteration of the foramen ovale previously to birth has been satisfactorily proved, the children have not, I believe, survived longer than from twenty to thirty hours. Still, in such instances it appears to have been evident, from the peculiar condition of the cavities of the heart, that the open state in which the arterial duct remained was essentially necessary for the due maintenance of the circulation, not only before but subsequently to the commencement of respiration. This was unquestionably the case in a most remarkable specimen of the kind which I have been kindly permitted to examine by my friend Mr. Ebenezer Smith; here the closure, *ante partum*, of the foramen was associated with an extreme degree of contraction, almost amounting to obliteration, of the left cavities of the heart, a condition which rendered the existence of a free communication through the ductus arteriosus absolutely indispensable.

Vieussens relates[*] the case of a male child which, at its birth, appeared well nourished, and of good shape, but its respiration was always difficult, its voice hoarse and feeble, and the entire surface of its body constantly of a leaden colour. Its extremities were always cold. It survived its birth only about thirty hours, every means which was adopted to facilitate the circulation having proved ineffectual. The lungs were found to be remarkably swollen and congested, but not inflamed; the pulmonary blood-vessels were much dilated, and the pleural cavities contained a large serous effusion. The right ventricle of the heart was much enlarged, and the *pulmonary artery* extraordinarily dilated. There was no *foramen ovale*. "Thus," Vieussens remarks, "the blood had not passed with freedom from the right cavities of the heart into the left, and the left ventricle was unable to propel it to the surface and extreme parts in sufficient quantity, or with sufficient force, to maintain the natural warmth and colour of the body." No direct mention is made of the state of the *arterial duct* and left cavities of the heart in this case, but it appears probable, from the above description, that the former was pervious, and that the latter were deficient both in capacity and muscular power. In a case of this kind alluded to by Dr. Williams[*], there existed an unusual communication between the vena cava and pulmonary veins.

Cases of this description are of the highest importance in a medico-legal point of view, as they fully disprove the opinion maintained by many anatomists, that obliteration of the foramen ovale must be received as a certain evidence that respiration has been established. It is assuredly impossible to deny that in the heart of a child which has died within the uterus, and has been expelled in a putrid condition, the foramen ovale may be found completely and permanently closed.

In such cases as these, it would, however, probably be always possible to determine, by an examination of the heart and its appendages, that the closure of the foramen had occurred at some period or other antecedent to birth.

The above cases complete the series of instances in which non-obliteration of the arterial duct is found to exist in conjunction with some obvious cause of mechanical obstruction to the circulation either in the pulmonary or systemic vessels. A variety of examples in which an open state of the duct was observed independently of any evident cause of impediment to the circulation, will be adduced in the next section.

[To be continued.]

FAT IN THE SALIVA.

On examining the saliva of a phthisical patient, Dr. Landerer observed that it contained a quantity of minute disks of fat diffused through it. This fatty matter greased paper and silk; and when the saliva was diluted with warm water, it floated on the surface as a layer of free oil. This oil, when separated from the saliva, had a yellowish-brown colour, a very rancid odour, with an acrid taste and sour reaction, similar to oleic acid. Exposed to intense cold it formed a crumbling substance; it was readily soluble in absolute alcohol, in ether, and in liquor potassæ, with which latter it formed a saponaceous mass. On the addition of an acid to the solution in potash, the oil was thrown down somewhat altered.—*Heller*, *Archiv*, Heft 4, 1846.

---

parts would readily bring the nervous loop into too intimate contact with either of those portions of the cylinder at which permanent constriction is liable to occur. I have, however, never ventured to advance my view of this subject otherwise than as an opinion, which, although founded upon a considerable number of remarkably corroborative anatomical facts, is as yet by no means absolutely proved Still, I believe that its probability is not in any way invalidated by the above objections. I must again draw attention to the remarkable arrangement of the nervous loop around the obliterated branchial canal, represented in Fig. 3 of this chapter, as corroborative of my view respecting the influence of the recurrent nerve in closing the arterial duct.

[*] Traité de la Structure du Cœur, Chap. viii. p. 25.

[*] Cyclopædia of Practical Medicine, vol. iii. p. 67.

ON THE

PATHOLOGICAL CHARACTERS OF THE BLOOD,

AS IT EXISTS IN THE PYREXIÆ.

By William Camps, M.D. Edin.
Physician to the Farringdon General Dispensary, &c.

In my last paper on the Pathological Characters of the Blood, I directed attention to the states of this fluid, in a class of diseases denoted by nosologists the Exanthemata. Since the Exanthemata are usually included in a larger class or group of diseases, the Pyrexiæ, and as this present paper professes to treat of the conditions of the blood in this larger class, very much of what was advanced on the former occasion alluded to will be applicable on this occasion also. Cullen, and I believe most of the physicians of the French school of medicine, adhere to this arrangement, or classification; but Mason Good, in his nosological arrangement of diseases, has placed the Pyrexiæ and the Exanthemata in different orders of a group, which he describes under the term Hæmatica, as consisting of diseases affecting the sanguineous function: and in this group he places also the Phlegmasiæ, as might be supposed. But, although the Pyrexiæ and the Exanthemata resemble each other in many of their causes, their symptoms, their morbid products, and also greatly in the characters of the blood, it is in these very particulars, namely, in the causes which produce them, in the symptoms by which they are distinguished, in the peculiar nature of the morbid products affecting the solids, morbid products, or alterations usually subsequent to considerable febrile excitement, and in the striking differences observed on the analysis of the blood, that the Pyrexiæ differ so evidently from the Phlegmasiæ. In the Pyrexiæ the fibrine of the blood is seldom or never increased in quantity; it is often in its normal proportion, and sometimes it is much diminished. MM. Andral and Gavarret have made upwards of fifty analyses of the blood drawn from patients affected with typhoid fever, and they found that usually in this disease the blood is deficient in fibrine, and sometimes also in albumen; indeed, they assert that the fibrine is never above its normal standard in genuine typhoid fever: it is sometimes in this proportion, but more frequently it is below it, decreasing in proportion to the advancement of the disorder. They state that this cannot be due to the repeated bleedings, or to the continued low diet to which their patients were subjected, for extended observation has convinced them that these circumstances induce no change in the proportion of the fibrine of the blood in other diseases. As soon, however, as symptoms, or indications of convalescence, appear, the fibrine begins to increase, even before the organisation could contribute a supply by increased nutriment. This continues during the progress of convalescence, whilst the proportion of the blood-corpuscles simultaneously decreases. MM. Becquerel and Rodier have made seventeen or eighteen analyses of the blood, taken from patients affected with typhoid fever. In these analyses they found that the fibrine varied considerably in its proportion; the blood-corpuscles and the albumen in most instances were diminished. They observed no remarkable peculiarity in the clot, and state that there was none of the softness and diffluence it it so much noticed by older writers. This need not surprise us, as it is very probable, the cases of typhus, or typhoid fever, in which they doubtless examined the blood with proper accuracy, were not of that severe, putrid, adynamic type, which we find so well described by these older writers, and in whose descriptions of typhus and putrid fevers we find so much importance attached to the appearance of the blood after its coagulation. MM. Simon, Chomel, Lecanu, Jennings, and Scherer, have also analysed the blood of patients affected with typhus, or typhoid fever, but not so frequently as those observers before quoted. Tables of their analyses may be found in Simon's Chemistry of Man, to which, or to its translation by Dr. Day, I beg to refer the reader.

I find that MM. Andral and Gavarret, Jennings, and MM. Becquerel and Rodier, have analysed the blood taken disease the blood was found to present nearly the same characters as was observed in typhus or typhoid fever. Andral and Gavarret found that in the blood drawn at the commencement of continued fever the fibrine did not exceed its normal proportion; that in most of the cases it was much below this, and in one case it was as low as 1·6. The proportion of the blood-corpuscles, although not in all the cases, yet in the greater number of them, was found more or less increased, and in that case in which the fibrine was only 1·6, the blood-corpuscles amounted to 157·7. The amount of the residue of the serum was increased, as was the case with the solid constituents of the blood generally.

Of the blood in intermittent fever, I do not find any other analyses recorded than those of Andral and Gavarret, who remark, that, no matter at what period of the disease the blood is taken, whether during the remission, the hot or the cold stage, the composition does not appear to be affected by one period more than by another. Blood in most of their analyses was taken from patients affected with tertian or quotidian fever, and is shewn to deviate much less in its chemical constitution from the blood in its healthy physiological state, than the same fluid does in the other Pyrexiæ. They remark, "that in consequence of the absence of all disturbance in the normal functions of the organism during the remission of the febrile symptoms, it might be concluded, *a priori*, that no peculiar changes would be exhibited in the blood."

Such a diminution in the proportion of the fibrine as we observe to exist in this class of diseases, involves striking modifications in the physical characters of the blood. The blood drawn from a vein of an individual suffering from one of these diseases presents the following characters:—The serum and the clot are not perfectly separate or distinct from each other, so that the quantity of the serum appears to be small in proportion to the clot, which latter is therefore large, and sometimes nearly fills the vessel into which the blood is drawn; it is never cupped, as it very frequently is in the true Phlegmasiæ. Its consistence is such, that it is very easily torn or broken down by pressure; indeed, cases are observed in which it may be reduced to a state of diffluence or dissolution by the slightest agitation or pressure, so that it seems to be mixed with the serum, which it renders thick, and more or less red-coloured. Every practitioner who has remarked the physical conditions of the blood taken from patients suffering from an attack of idiopathic fever, must have observed that it presents the characters just described.

I myself have seen this physical state of the blood repeatedly in cases of ordinary typhus fever, in the fever wards of the Edinburgh infirmary, and also in cases of the typhoid fever—fièvre typhoide, adynamique, so often met with in the hospitals in Paris and in Berlin.

In putrid fevers, as we might expect, this state of dissolution of the blood is said to exist in a more striking, a more evident manner. In addition to these characters, some physicians, and amongst others Huxham, state that when blood is drawn in cases of putrid fevers, they have observed a fœtid odour from it. Pringle also states that he has observed a putrid odour in fresh drawn blood in certain cases of fever occurring in the army. M. Bonnet de Lyon has asserted that the blood of individuals attacked with typhus fever contained hydro-sulphuret of ammonia, a salt which Vauquelin has found on analysis in putrified blood, and it has been stated that sulphuretted hydrogen is developed in the blood in some cases of pestilential diseases.

MM. Rossi and Bellingeri have compared the electrical conditions of the blood in these and other diseases with those observed in healthy blood. The blood in the Pyrexiæ seldom or never presents a buffy coat; indeed, M. Andral states that he has never observed it to be present unless there be some decidedly inflammatory complication co-existing, either in the milder or severer forms of typhoid fever, or in measles or in scarlet fever, or in small pox. In reference to the large size of the clot, and the presumed increase in the proportion of the blood corpuscles, M. Andral makes some interesting remarks. Whilst he attributes the cause of the large size of the clot to a greater proportion of the blood corpuscles contained in it, especially in the earlier periods of the disease, very often, he says, he was surprised at the abundance of the blood corpuscles, so much beyond their normal proportion in persons attacked with severe typhoid fever; and, in an early memoir on the alterations of the blood, containing the substance of a course of lectures on the blood in various diseases, which I had the privilege to hear him deliver in Paris, he states that he was disposed to consider this increased proportion of the blood corpuscles to be one of the characters of the blood in the Pyrexiæ. At that time he had not so thoroughly investigated the condition of the blood in plethoric subjects; therefore, he says, if in typhoid fever we often find an excess in the proportion of the blood corpuscles, it arises from the fact that very frequently typhoid fever attacks individuals who, by reason of their age and their constitution, are in a more or less considerable state of plethora. He considers that the excess in the proportion of the blood corpuscles deserves so little to be regarded as an essential character of typhoid fever, that he has observed this disease to attack young chlorotic girls, in whom the blood is found to be deficient in blood corpuscles. Whatever may be the influence of the disease on the blood corpuscles, whether they be in excess or in deficiency, its influence on the fibrine remains constant, producing a diminution in its proportion.

The practical results to be deduced from the foregoing remarks on the characters of the blood in this class of diseases may serve to assist and guide us in the employment of appropriate remedies throughout their natural progress; so that, by co-operating, instead of interfering, with nature, we may contribute towards their favourable termination, and so conduct our patients safely through them.

50, Green Street, Grosvenor Square,
Nov. 18, 1846.

SUGAR IN THE FLUID OF ASCITES IN A DIABETIC PATIENT.

In the fluid drawn from the abdomen of a diabetic patient who was attacked with ascites, Dr. Lauderer detected evident traces of the presence of sugar. The existence of this substance in almost all the secreted fluids in the body of persons affected with diabetes has now been proved.—*Heller's Archiv.* Heft 4, 1846.

OBSERVATIONS ON TWO FORMS OF DYSMENORRHŒA.

By Henry Oldham,
Physician-Accoucheur and Lecturer on Midwifery at Guy's Hospital.

[Concluded from p. 923.]

Case.—*Painful but copious menstruation — dysmenorrhœal membrane—large and retroverted womb—bleeding—mercury—cure.*

Mrs. G., æt. 31, living at Bow, was pregnant soon after marriage, and bore a living child, which is now 9 years old. Since this time she has had several early abortions at the fifth or the sixth week: and a year ago, when pregnant, she was much frightened at an accident to her husband, and again miscarried. Both before and since this time she has suffered a great deal from pains in the back and hips, for which she has been under medical treatment.

She first consulted me on Nov. 20th, 1844, when she was evidently suffering severely. Her countenance was distressed; she walked with pain, and appeared to be much out of health. Her symptoms were referred almost entirely to the uterus. She complained of habitual pain, which she called painful pressure, at the sacrum, running down to the anus; constant pain in the right inguinal canal; occasional dysuria, which, with the other pelvic symptoms, was much increased by walking or exertion of any kind. When she sat down there was pain produced within the pelvis. The bowels were relieved without pain. A copious thick discharge, sometimes white and at others yellowish, had troubled her for years. Sexual coitus had caused much suffering, and, in fact, had been abandoned. She menstruates regularly, but with severe pain; sometimes copiously, so that several clots escape, and sometimes shreds of membrane have been noticed: she feels better and lighter after the periods.

On examination, the vagina was found loose and hotter than usual, and freely bathed with discharge. The posterior wall bulged a little beyond the ostium vaginæ. The uterus was found within two inches of the tumid, soft, slightly painful to the touch; and the os, which was patent and uneven, gave that feeling of raised soft granulations which characterises the most common form of ulceration of this part. This portion of the womb was directed towards the under surface of the urethra. The body of the womb was readily felt backwards towards the hollow of the sacrum. It was much swollen, very tender when touched, and was evidently retroverted. On directing the finger to the front part of the cervix, and pressing the part downwards and backwards, the body of the womb was readily redressed, and she felt at once a relief from the painful sense of pressure in the sacrum and hips. When the finger was removed the womb fell heavily back again towards the sacrum. By speculum the cervix showed a surface of vividly injected granulations, and a large plug of mucus was pressed out from its cavity.

The treatment in this case consisted in scarifying the cervix, and thus bleeding the womb; taking from one to two ounces of blood at a time, which was repeated on several occasions. She was kept at rest; the bowels were relieved by saline aperients, and she used the following injection: —Dec. Papav. vj.; Ext. Conii, ℈j.; Liq. Plumb. diac. ʒij. Speedy relief followed the use of these means, and I did not see her for some time.

In July 1845, she brought me a portion of membrane, which had been passed at the last period, after severe pains like labour pains; and on examining it I found it was a good specimen of dysmenorrhœal membrane. She told me at the same time that she was convinced that in several of her supposed early abortions she had passed the same product. On two or three occasions after this, she brought me portions of membrane which were cast off after severe suffering at the menstrual time, which were now often deferred for a few days or a week beyond their proper period. On the 10th of February, 1846, after a period of intense pain, she again passed some detached portions of membrane. She had had difficulty in emptying the bladder, which was relieved by her passing water in the upright position. The uterus was found retroverted, and the body was swollen into a large globular hardened mass, painful to the touch. Any exertion produced great pain in the sacrum and hips, which was again at once relieved by redressing the womb during a vaginal examination.

I now determined to leech the uterus once a week, to keep her strictly at rest, and to put her under a course of mercury. The effect of this was to reduce the womb, and to give her great relief. She passed through the two following periods without much suffering, and no membrane was cast off. On the 30th of May she brought me two small portions of membrane, which had caused her some severe pain when passed. The seat of pain was in or about the right inguinal canal, and she said that she could touch the spot from whence she fancied the membrane was torn away. The remainder of the period was passed without pain. The uterus was now very much reduced in size, and although more vertical than it should be, it was not inclined backwards. She is able to walk and follow her usual pursuits without pain. A blister was applied to the sacrum, and a little mercurial ointment was rubbed at night over the painful part. Since this period she has menstruated with comparative comfort, and the womb, although perhaps rather large, may be said to be fairly healthy and well placed.

This is a case which in its general features is frequently met with in practice, and it may be very well taken to illustrate the pathology, symptoms, and treatment, of the membranous form of dysmenorrhœa. It will be seen that painful menstrual periods, with a copious rather than a scanty flow, the unfolding and casting off of portions of membrane, then a large heavy indurated womb, the weight of which destroys its balance and displaces it backwards, are the principal signs to be noticed. Partial prolapse too, congestion and ulceration of the cervix, with sterility, may also be remarked. It is not my design in this communication to treat at full length the subject of membranous dysmenorrhœa, but a few remarks on the sequence of morbid actions in this class of cases, with the treatment which is indicated, will, I hope, be thought useful.

The membrane which is thrown off

from the womb in this disease varies in its appearance; sometimes a clear tubular cast of the uterine cavity is expelled, although this, I believe, is comparatively rare. More frequently, small portions the size of the nail, or larger pieces of an irregular shape, are detached, and cause severe suffering in their expulsion. Sometimes the menstrual blood coagulates around a portion of membrane, and comes away as a hard compact clot. Very often the discharge consists of thin thread-like portions, and sometimes half a cupful or more of thick branching tufts, very much like the chorion villi filled with blood, will be thrown out from the womb. This latter variety of discharge has, I believe, been mistaken for the so-called hydatid degeneration of the placenta, which I feel persuaded never takes place unless impregnation has preceded it and a true chorion formed. How is this membrane produced? It is generally thought to be lymph, but if some good specimens are carefully examined they will be found to possess the same structural elements as the uterine decidua. Not only do they resemble the decidua in having an attached rough surface and a smooth free one, but what is far more significant of their identity is, that they are full of little holes with epithelial scales, which I cannot doubt are the openings and epithelium of the follicles of the uterine glands. It is very true, as Dr. Montgomery has noticed, that the small cotyledonous sacs are wanting. But this is often the case in the flaps of uterine decidua which are thrown off in abortions, although here and there very perfectly formed specimens of them are to be found. I doubt whether the swollen uterine glands bulge out into sacs until the ovum gets fixed by its exochorion within them, as, in two specimens of extra-uterine fœtation which I have examined,[*] the very exuberant decidua, with its characteristic apertures and epithelium, still remains tubular without expanding into cells. I have for some time entertained the conviction that the membrane cast off in dysmenorrhœa is formed from the enlarged uterine follicles, just in the same way as is the uterine decidua, and that, like it, it is detached from the cavity of the womb. The shred-like masses are caused by a very recent and imperfectly formed membrane which breaks up and becomes mixed with and stained by the menstrual blood.

The practical bearing of these remarks is, that as the uterine decidua is formed under the influence of an action going on in the ovary, so the membranous dysmenorrhœa is not primarily an affection of the womb, but of the ovary. In healthy menstruation the congestion of the ovary, the engorgement of the womb, the opening of the veins on the surface of the cavity of the womb, and the flux of blood, are all in harmony, the latter being, so to speak, the resolution of the former. But when the ovaries are unduly excited, as, for instance, from the prevalence of one or more of the numerous ways in which sexual feelings may influence them, then the uterine glands sympathetically enlarge, the lining membrane of the womb becomes raised, and the body of the womb swells out. This change in the mucous membrane goes on during the interval between the monthly periods, and when the flow begins the new formation is cast off, and the uterus in the act of detaching and expelling it becomes the seat of very painful contractions. Gendrin, Jörg, and others, have enumerated amongst the changes which are observed in the internal sexual organs during menstruation, that the lining membrane of the womb is covered with fungiform villi which are probably vascular. And this observation would seem to be related to Müller's idea, "that menstruation is the result of a periodical regeneration, a kind of moulting of the female generative organs, attended perhaps with the formation of a new epithelium."[*] I lately examined the uterus of a young female who died menstruating, but the mucous membrane was still clear and smooth. Blood exuded freely when the substance of the womb was pressed, but there was no appearance of that raising of the lining membrane of the womb which is erroneously described as from fungiform villi. I very much doubt whether this change, and the consequent periodical moulting of the mucous membrane of the uterus, occurs uniformly during menstruation.

---

[*] *Vide* Guy's Hospital Reports.

It is speedily produced, however, under any morbid excitement of the ovaries, and is then cleared off either in threads, or thin flimsy portions, or in larger and denser patches, according to the degree of development at which it has arrived.

But there is a sequel of the membranous form of dysmenorrhœa which merits more attention, namely, the tendency of the womb to become permanently bulky and hard, and as the result of this to become retroverted. I can bear testimony to the truth of an observation of Dr. Rigby, that retroversion is one of the most common affections of the unimpregnated womb, and I would add, that one amongst several causes which produces it is the continuance of this membranous dysmenorrhœa. It will be noticed in the case I have related, and it is a mark of distinction between this and obstructed dysmenorrhœa, that at first a copious menstrual flow took place—menorrhagia, in short. This symptom, while it shews the way in which two different functional disorders of the womb are associated together or run into one another, is, I believe, a salutary effort to relieve the morbid congestion of the uterus. Like hæmorrhage from other organs when diseased, it is really conservative, a useful topical bleeding. But after a time the uterus does not recover itself, it becomes heavier and larger, and it appears that the posterior wall swells out more than the front wall, and then the womb loses its natural inclination forward; it first becomes vertical, then inclined backward, and at last retroverted. This change occurs slowly, sometimes taking many months to accomplish. The texture of the womb becomes altered. In a recent congestion the posterior wall is felt soft, compressible, and painful to the touch, but after repeated engorgements the tissue becomes harder, more solid, very much like a fibrous growth. A further change too I have noticed, which is, that occasionally when the womb is thus displaced, it excites inflammation in the neighbouring peritoneum, false membranes are formed which fix the womb, and an irreducible retroversion is the result.

I have laid some stress on the swelling of the posterior wall, because it appears to me to be more sensibly affected by congestion than the anterior wall. The natural convexity of this part becomes still more prominent, and, when examined by the finger, it often feels so round and solid, and swells out so abruptly from the cervix, that I am quite sure that it is often mistaken for a fibrous tumor. This swelling of the posterior wall forms a good practical distinction between a womb enlarged by congestion and a womb distended by an early pregnancy. I have been in the habit of depending very much on the even enlargement of the anterior wall of the womb, which is quite appreciable to the finger, as a good diagnostic mark of an early pregnancy. The natural flatness of the anterior wall is quickly effaced by pregnancy; so that, so early as a month or five weeks, this physical change may be detected.

The symptoms which attend this form of retroversion are not, generally speaking, so severe or so well marked as might be expected, or, indeed, as they are described. It is rare for the displaced womb mechanically to interfere with the bladder or the rectum, and as rare for it to press upon and obstruct the veins. Sometimes, however, if a person has been standing for any length of time, especially during menstruation, dysuria ensues, which is relieved by lying down for some hours. The rectum, too, in these cases, generally escapes pressure; and it is surprising, even when the womb is very solid and bulky, appearing to the finger to fill the cavity of the sacrum, how rarely mechanical constipation ensues. In these cases, as in pregnancy, there seems to be some mechanism, which I think, notwithstanding what has been said about it, is yet unexplained, by which the uterus is directed towards the right side of the pelvis, removing it from the rectum. There are, however, a class of cases where engorgement of the womb is associated with hæmorrhoids and bleeding from the rectum, which ought not to be confounded with the present cases: they occur in women whose digestive organs have been long disordered,—who indulge freely in eating and drinking, and take but little exercise,—whose bowels are habitually constipated, and the colon loaded. The urine in these cases is often charged with lithic acid, and, as a consequence of the portal congestion, the hæmorrhoidæl veins swell, and eventually the uterus becomes engorged. Painful and oftentimes copious menstruation occurs in this form of complaint, as Dr. Rigby has so well shewn; but the pathology of the two classes of cases is essentially different. In the one, the depraved state of the digestive organs induces engorgement of the womb; in the other, the affection is at first confined to the internal sexual organs, and any disorder of the general health is slowly induced.

The principal symptoms which I have noticed as the result of the large and retroverted womb have been, an habitual weight in the lower part of the abdomen, and a painful sense of pressure about the sacrum; pain of a dragging kind referred very distinctly to the inguinal canals, but very often only to one of them, with pain in the corresponding hip. There is pain, too, in sitting down, and a feeling as though some body were pressed upwards. If the cervix gets bulky and full, a thick mucous discharge comes on, which frequently is discharged in lumps.

It has been advised in these cases to redress the womb by means of the uterine sound; but I think this expedient is very rarely required. If the forefinger is placed against the anterior part of the cervix, and this part pressed backward, the womb, although large and heavy, may readily be raised and directed forward, and, in the act of reducing it, a sense of its weight and the extent of its displacement is conveyed to the finger. No permanent good, however, is obtained by the operation, as the womb quickly falls back again, and the same symptoms of pressure, which for the moment were relieved, again come on. I have known a great deal of pain caused by using the sound in the way described; and, if the womb is held by false membranes, to attempt to overcome the resistance by the sound would be not only painful but dangerous.

In the treatment of membranous dysmenorrhœa, with a large, hard, retroverted womb, I have found the plan which was adopted in the case described the most effective. It consists in keeping the patient as much at rest as possible, in regulating the diet so as generally to avoid stimulants, but not to lower the strength, and to give small doses of mercury, so as slightly to affect the gums: two grains of blue-pill, with three of Ext. Conii, night and morning, or five-grain doses of Plummer's pill night and morning, answer the purpose required. On the first appearance of the gums or palate being tender, I generally give the Liq. Hydrarg. Bichlorid. ʒj. in sarsaparilla or bark, which, while it keeps up the action of the mercury, is really a tonic, and improves the general health. If the patient does not bear mercury well, it is well to commence and continue with this last preparation, and a small quantity of blue ointment, with Ext. of Belladonna, may be rubbed at night over the inguinal region. Leeches should be applied to the upper and back part of the vagina once a week. Three or four will in general be sufficient, and I can safely say that they are easily applied, and offer the most effective means that I know of for reducing the womb. Cupping on the loins, or leeching the inguinal regions, are, in my experience, far less useful for the purpose. In the case which I have related the cervix was scarified several times because of the vascular granulations which covered it; but unless a surface of this kind is present, which bleeds freely on being lightly cut, I do not think it a good plan of local depletion. When the size of the womb is reduced by these means, an occasional blister on the sacrum will be found very useful. I have generally found patients obtain great relief by their application. The reduction of the womb may be assisted by warm hip-baths, or the injection of warm poppy-water into the vagina. By following out this plan of treatment, and attending to the general health, I have often succeeded in reducing these large, solid, hypertrophied wombs, with the dysmenorrhœa which accompanied them, and the conviction has forced itself upon me, that the cases of fibrous tumor which have been supposed to be cured have really been cases of this kind. When the influence of mercury is obtained, small doses of Iodide of Potassium, or, what I have found more useful, small doses of the Liq. Potass. Arsen., may be given with advantage. The latter medicine should be administered in the way recommended by Mr. Hunt—on a full stomach, and in decreasing doses.

Sometimes the womb has so long

splaced, and is so very hard,
eems to resist any attempts at
. have now a case of this kind
are in a woman æt. 48, who has
o menstruate for a year and a
n this, as in similar cases, the
: stem support described by Dr.
a effectually retains the womb
but I have not found this
ıent desirable in other cases.
ject generally is not to support
womb, but to lessen its size, to
.e ovarian excitement which is
g it, and to secure its spontaneous
ion. In these cases much com-
obtained by an elastic abdominal
belt, with a perinæal support.

The views which have been propounded on this subject may be expressed in the following conclusions:—

1. There is one form of menstruation rendered extremely painful from the production and casting off of a membrane from the cavity of the womb.

2. That this membrane is not a product of inflammation, or a thick mass of epithelium, but it is formed from the uterine glands just as the decidua is, and is detached and expelled in the same way.

3. That the morbid action does not begin at the uterus, but in the ovary; and the sequence of effects is first ovarian congestion, calling forth a sympathetic growth of the uterine glands, forming a false decidua, and uterine engorgement.

4. That this uterine engorgement is oftentimes relieved by a profuse menstrual flux; but if not, the posterior wall of the womb gradually increases in bulk and becomes hard, the balance of the womb is spoiled, and the body falls back, retroverting the womb.

5. That the swelling of the posterior wall, and the falling back of the womb, forms a differential diagnosis between congestion and early pregnancy, the anterior wall enlarging in the latter, and the body of the womb directed forward.

6. That the symptoms of retroverted womb from this cause are not often those of mechanical obstruction to the other pelvic viscera, and they are for the moment relieved by redressing the womb, which may almost always be effected by the finger without the aid of the sound.

7. That the treatment consists in strict attention to the general health, but that the most effectual way of removing the disease with the enlarged womb is by leeching the uterus, and the use of mercury.

LIEBIG AND HIS DISCOVERIES.

Born in an age which would crowd into an hour the experiences of a year,—as it passes within that space of time, over distances which the last could hardly accomplish in a day,—Liebig led the trusting public over the new railroad which he had laid down; persuading them that his was the only way, and he the only engineer to be confided in. The race has been run too heedlessly; and a re-action has arisen against this leader, because some of the conditions of his prospectus have not been fulfilled. The agriculturist has not seen the realization of those hopes which Liebig fostered; and the chemist, having a little breathing time, discovers that fallacies grow in Giessen as well as in other schools of science. This reaction appears to have jarred upon the sensitive mind of Liebig, and having the "Annalen der Chémie und Pharmacie" at his command, he has given to the world sundry manifestations of temper which it would have been wiser to have confined to his most secret closet. These unfortunate sallies have now become so common, that the "Annalen" are consulted in the continental schools, not to learn new discoveries in science, but who comes next under the lash of Liebig. His attacks are wanting in even ordinary discrimination; and it would seem that in his wrath he is frequently blind to the fact that he is writing against his own published views. * * * It is not on Mulder alone that the "Annalen" inflicts the lash; Berzelius, Dumas, and many others, come in for their share. All who will not allow Liebig to chain their thoughts to his hypothesis, become the objects of his anger and vituperation. The inference is, that he must be sensible of wanting sufficient practical evidence to support many of his views. He betrays weakness by his intemperate attacks, and will suffer the loss of much present honour in consequence. A cloud is already gathering on the brightness of his fame; and it is to be anticipated, that for a time the obscuration will increase. Such is the natural result of those infirmities which enter into the constitution of Liebig's mind."—*Athenæum.*

MEDICAL GAZETTE.

FRIDAY, DEC. 4, 1846.

In a former number* we published certain resolutions which had been adopted by a meeting of medical practitioners at Nottingham respecting the mode in which coroners' inquests are conducted. As it is our intention to offer a few remarks upon this subject, we here reprint three of these resolutions:—

"1. That it is the opinion of this meeting that the present mode of conducting coroners' inquests in this county does not adequately promote the ends of justice.

"2. That as it is impossible for any coroner who is not a medical man, always to know when medical evidence is necessary, and as he might choose to dispense with it in cases where it would be absolutely essential to the finding of a correct verdict, it should be unlawful for a coroner to hold any inquest without taking the evidence of a duly qualified medical man; except in those cases where the cause of death is so obvious as not to admit of any reasonable doubt.

"3. That in all cases where a legal investigation of the cause of death is required, it shall not be deemed sufficient to record the following vague and indefinite verdicts: viz, 'Died by the visitation of God,' 'Death from natural causes,' 'Found dead,' 'Overlaid,' &c., but that the true and proximate cause should always if possible be stated."

These resolutions, it will be observed, were intended to refer to the mode in which inquests are conducted in the county of Nottingham; but in our opinion they have a common application. In the remarks which we are about to make on this subject, we have not the slightest intention of fixing blame upon individuals. It is the system under which coroners are appointed that we condemn; and it is precisely because we have a great respect for the office, that we are desirous of seeing it placed on a much better footing, than it appears to be at the present time.

It has been long a matter of just complaint, that but few civil appointments are awarded to members of the medical profession. Commissionerships, of whatever kind or nature, appear to fall naturally into the hands of lawyers; for there is scarcely a Commission appointed in which the members of the legal profession do not form the whole, or at least the majority, of the *paid* members. Sometimes, apparently for decency's sake, a few medical men are joined with them. Thus, in the late Lunacy Act, there has been a tolerable approach to a fair balance, and three medical have been associated with three legal gentlemen as paid Commissioners. In this general absence of Government patronage,* we do not see why, under proper restrictions, the office of coroner should not be filled as a matter of right by persons selected from the medical profession. At present it is a perpetual struggle at every election, whether a legal or a medical man shall occupy it; and we continually hear the plausible argument used, that the lawyer is best fitted for it, by reason of the large amount of legal knowledge which it is always *assumed* he possesses. This has been uniformly regarded as a conclusive argument in favour of the appointment of *legal* coroners, by those who have only a theoretical acquaintance with the proceedings of a Coroner's Court. Let any unbiassed person, however, watch these proceedings in an important investigation, where the main question relates to the cause of death; and then let him determine, whether, if the two professions are to be thus contrasted, a knowledge of medicine or law is most required on the part of this functionary for the safe performance of his duties. The slightest reflection will, we think, show, that, while by a writ of *habeas corpus* a mistake on a point of law easily admits of correction or exposure by the Court above, a mistake or a misapprehension of a medical question may lead either to the concealment of a murder, or to the committal of an accused person on what may turn out to be a false and groundless charge. But there is a much shorter and simpler test. Let a return be made of the number of inquisitions quashed by the superior Courts during the last ten years, on the ground of *legal informality*, and we venture to affirm that the result will show that legal, have very small claims to preference over medical coroners, on the ground of their possessing a better knowledge of the law.

---

* See page 258.

* See page 938; On Reward of Medical Services.

We do not mean to contend, however, that medical men are to be appointed to this office without some kind of preparation: they should be able to shew, by examination or otherwise, that they possess a competent knowledge of the law of evidence, and that they have prepared themselves for the duties of the coronership by the study of forensic medicine. There appears to be at present no prospect of any change being made in the mode of appointing coroners; but, in the hope that, during the discussions which are likely to ensue in the next session of Parliament on the Health of Towns Bill, the Legislature may perceive the necessity for introducing an amendment to the old statute 28th of Edw. III., we shall here take leave to offer a few suggestions.

The 175th clause of the Health of Towns Bill, drawn up by the late Government, creates for the first time a new and important office in the shape of a medical officer of health, whose duty it will be, under the order of the coroner, to make all post-mortem examinations and analyses which may be required in his district: indeed, as we understand the clause, this officer will render the attendance of medical practitioners as witnesses at inquests entirely unnecessary. Before such a provision as this is, however, carried into effect, we think the mode in which the coroner is appointed to his office requires a thorough revision. To place a competent man in the position of a *witness*, and, possibly, an incompetent man in the position of a *judge*, would, indeed, be an anomaly, and tend to perpetuate some of the abuses which the new measure is obviously intended to correct.

The clause above referred to informs us that the medical officer of health is to be a legally qualified medical practitioner *of skill and experience;* and, from the duties which are to devolve upon him, it is obvious that he must be highly educated in his profession. The Bill stipulates that the appointment of this officer shall rest with the Commissioners, under the approval of the Secretaries of State. Another important fact is, that he is to be paid by a fixed salary, and not by the number of nuisances which he suppresses!

Widely different is the practice now pursued in the election of coroner. Under the 7th and 8th Vict. c. 92, the whole machinery of a county election is put in motion, with the turbulence and riot which signalize such proceedings. Thus, in order to appoint an officer whose main duty consists not in acting as a Parliamentary representative of the freeholders, as the mode of election would imply, but in inquiring into the *causes of death in cases of suspected violence*, sheriffs, poll-clerks, inspectors, and electors, are deemed absolutely necessary by law. The candidate is not required to be a person "of skill and experience:" he need only be in possession of "a knight's fee," or its equivalent.[*] The electors are considered to be legally qualified to confer this important office upon any individual, provided they be possessed of only the smallest amount of freehold in the county. When elected, the coroner is paid not by a salary which is fixed, or which renders him independent and unfettered, but by one determined by the number of inquests which he holds, the decision respecting the propriety of holding such inquests resting entirely with himself! To add to the absurdity of this mode of electing an individual to fill a most important public office, the coroner is directed by a recent statute[*] to advance and pay all the expenses attending the necessary performance of his duties, and to submit his accounts for revision before the magistrates in quarter sessions.

Under a system of this kind, the election of a competent person must be the result of a mere accident, and in our view it is open to the most serious objections. It is only a natural consequence of such a system that duties should be improperly discharged, and that complaints should have arisen in all quarters against the mode in which inquests are conducted.

Reviews.

Cosmos: Sketch of a Physical Description of the Universe. By ALEXANDER von HUMBOLDT. Vol. I. Translated under the superintendence of Lieut.-Col. EDWARD SABINE, R.A. For. Sec. R. S. 8vo. pp. 473. Longman and Murray London: 1846.

IT is not long since we reviewed one translation of this work[*], and we have here another which, as we are informed by the preface, was undertaken in compliance with the wish of the author, Baron von Humboldt. The task has been performed by Mrs. Sabine, under the superintendence of her husband; and an examination of the volume has satisfied us that the translation reflects great credit on both parties. In our former notice we stated sufficient to give our readers an idea of the nature and objects of "Cosmos," and of the plan according to which its distinguished author proposed to work out the history of the celestial, terrestrial, and organic spheres.

Few men are better qualified than Alexander von Humboldt to undertake a work of this kind, in which a knowledge of astronomy, physical geography, zoology, geology, and palæontology, is required in order to furnish materials for a complete history of the universe. There is no difficulty in procuring facts; but the great art consists in so blending them together that the specialities of each science shall not be brought prominently forward. It is here that we think the author has been perfectly successful, and has contrived to produce a treatise which may be read with equal interest and profit by the philosopher, the student, and the man of the world.

---

[*] This vicious principle of making the qualification of a coroner to depend upon *property*, and not upon his *skill* or *experience* in the intricate questions affecting life and liberty, which are liable to come before him, has been further carried out during the last session of Parliament by an act to amend the laws in reference to the office of coroner in Ireland—9 and 10 Vict. c. 37, which will come into operation on the 1st of January, 1847. The only legal qualification for the office is comprised in the 16th section, which we subjoin:—

"And be it enacted, That from and after the passing of this Act no person shall be elected or chosen to the office of coroner for any county, riding, or division, or district thereof, or for any county of a city, county of a town, or borough, or district thereof, who shall not at the time of being so elected or chosen be seized to and for his own use and benefit of some estate of inheritance of the clear annual value of fifty pounds sterling, over and above all charges and incumbrances that may affect the same, or of an estate of freehold for his own life, or for the life of some other person or persons, either at law or in equity, of the clear yearly value of one hundred pounds sterling, over and above all charges and incumbrances which may affect the same, or in lands, tenements, or hereditaments situate within the county, county of a city, county of a town, or borough for which or for any district of which he shall be elected or chosen as aforesaid, or within the County next thereto adjoining; and in any case any person shall be elected or chosen to serve the office of coroner, from and after the passing of this Act, who shall not at the time of his being so elected or chosen be seized of such an estate in lands, tenements, or hereditaments, as is herein-before required, such election shall be null and void."

This is the latest piece of legislation regarding coroners; and, as it contains many provisions of importance to medical practitioners, we shall enter into an analysis of it hereafter.

[*] 1 Vict. c. 68.

[†] Vol. xxxvii. p. 241.

We pass over the introductory remarks on "the different degrees of enjoyment offered by the aspect of nature, and the study of her laws," as somewhat tedious and uninteresting. It may be regarded as a dry preface, marked by occasional flights of transcendentalism, in which the reader will find but little to repay the time occupied in the perusal. The work may be truly said to commence at page 67, with the "General View of Nature." We here fall at once on the nebular hypothesis, and are furnished with a proof of the rapidity with which discoveries are daily made in science. Since this work was written many of what are here called *unresolvable* nebulæ have been resolved into clusters of stars under the power of Lord Rosse's telescope; and the facts thus brought to light lead to the very strong presumption that all nebulæ are of the same character, and their existence as confused masses of light must therefore be ascribed to the imperfection of our instruments*. Then, again, Uranus is described by Humboldt as forming the planetary boundary of our system; but within the last three months the researches of M. Le Verrier have revealed to us the existence of Oceanus, a planet 250 times the bulk of the earth—the largest in our system except Jupiter and Uranus—and no less than 150,000,000 miles more distant from the sun than the latter!

One of the most extraordinary instances of human ingenuity in relation to physical optics is seen in the invention and use of the polariscope. This instrument, in the hands of Arago, has enabled us to distinguish a body which reflects light from one which is self-luminous; and therefore to determine its real nature even at the distance of thousands of millions of miles. This instrument has been applied to the analysis of the light of comets, fixed stars, and planets.

> "We are indebted to Arago's polarization experiments for the most important and decisive observations on the nature of the light of comets. This polariscope instructs us concerning the physical constitution of the sun, as well as that of the comets; it informs us whether a luminous ray which reaches us from a distance of many millions of miles, is a direct, or a reflected, or a refracted ray; and if direct, whether the source of light is a solid, liquid, or a gaseous body. The light of Capella and that of the great comet of 1819, were examined at the Paris Observatory with the same apparatus. The comet showed polarized, and therefore reflected light; whilst, as was to be expected, the fixed star was proved to be a self-luminous sun. The existence of polarised cometary light announced itself, not only by the inequality of the images, but was shown with still greater certainty at the re-appearance of Halley's comet in 1835, by the more striking contrast of complementary colours, in accordance with the laws of chromatic polarization discovered by Arago in 1811. These fine experiments leave it, however, still undecided whether, besides the reflected solar light, comets may not have a proper light of their own. Even in planets—in Venus, for example—the evolution of independent light appears very probable." p. 97.

This instrument has not, so far as we know, been yet applied to the analysis of the light of the new planet Oceanus.

The interesting facts connected with the density and structure of the earth are well described; but in treating of the theory of internal heat, and of the thickness of the solid crust of the globe, neither the author nor the editor appears to be aware of the remarkable researches of Mr. Hopkins on the effects of the sun's and moon's attraction in reference to the phenomena of precession and nutation. By a series of ingenious calculations based upon the precession of the equinoxes, Mr. Hopkins has come to the conclusion, that the space occupied by the molten mass of the interior of the globe, is much smaller than that which is commonly assigned to it. His conclusion is, that the minimum thickness

---

* The reader will find a full account of the extraordinary discoveries hitherto made in the stellar system, under the use of Lord Rosse's telescope, in Dr. Nichol's Thoughts on some Important Points relating to the System of the World, lately published.

> searched, perhaps no other portion of our planet presents such fulness of organic life.
>
> * * * Our land forests do not harbour so many animals as the low wooded regions of the ocean, where the sea-weed, rooted to the shoals, or long branches of fuci detached by the force of waves and currents, and swimming free, upborne by air-cells, unfold their delicate foliage. The application of the microscope still further increases our impression of the profusion of organic life which pervades the recesses of the ocean, since throughout its mass we find animal existence; and at depths exceeding the height of our loftiest mountain chains, the strata of water are alive with polygastric worms, cyclidiæ, and ophrydinæ. Here swarm countless hosts of minute luminiferous animals, mammaria, crustacea, peridinea, and ciliated nereides, which, when attracted to the surface by particular conditions of weather, convert every wave into a crest of light. The abundance of these minute creatures, and of the animal matter supplied by their rapid decomposition, is such that the sea-water itself becomes a nutritious fluid to many of the larger inhabitants of the ocean." p. 303.

It is impossible to read passages like this without feeling that the translator has done full justice to the author's powers of description. We must pass over that portion of the work which is devoted to the atmosphere and climatology, in which some questions of interest in a hygienic point of vie
discussed, as it would carry

writers on scientif
throw out this as a
ment in the second
would also suggest t
index should be at
when completed.

In concluding our
volume of Humbold
can conscientiously
derived great pleasu
from its perusal.
be known in order
popular work, and
only to lie on the li
to be read by, every n
who takes an intere
of general science.
do not hesitate to s
et ament meminisse

The Health and Sic
pulations consider
to proposed Sanita
pp. 119. London

This essay formed
interesting article
number of the *New*
We should have not
as it was pretty ob
close of the last sess
that the projected b
towns would be with
one introduced, we c

We make no extracts from the pamphlet at the present time; but we shall probably avail ourselves of the author's observations in some remarks which we propose to make hereafter on sanitary legislation.

Quarantine and the Plague. By Gavin Milroy, M.D., &c. Pamphlet. 8vo pp. 71. London: Highley. 1846.

This is a reprint of an excellent article on the subject of the quarantine laws, contained in the last number of the *Medico-Chirurgical Review.* The interminable discussions which have been going on for the last year in the Royal Academy of Medicine, have only served to bury the important questions connected with quarantine and the plague, in a heap of arguments embracing the personal views and conflicting statements of an endless succession of voluble speakers. Dr. Milroy has here published a judicious summary of the really useful and practical points which appear in the Report on these subjects recently addressed to the Academy. It is not unlikely that the quarantine laws will undergo revision in the next session of Parliament; and this pamphlet will therefore be useful in directing the attention of legislators, as well as of medical men, to the more prominent grievances of the present system.

On Medical Education: being a Lecture delivered at King's College, London, at the Opening of the Medical Session 1846-7; *with a Lecture delivered on the same occasion in the Year* 1842. By W. A. Guy, M.B. Cantab. Professor of Forensic Medicine in King's College, &c. Pamphlet. 8vo. pp. 64. London: Renshaw. 1846.

These introductory lectures are intended to lay before students a clear outline of the duties and responsibilities which they incur in selecting medicine for a profession. They are written with judgment and good sense, and contain advice which might be profitably followed by a large number of those students who resort to London for the completion of their medical education.

The Economy of the Animal Kingdom considered Anatomically, Physically, and Philosophically. By Emanuel Swedenborg. Translated from the Latin, by the Rev. A. Clissold, M.A. Vols. 1 and 2. 8vo. pp. 574, 426. With Introductory Remarks, by the Editor. London: Newbery, Baillière. 1846.

The Economy of the Animal Kingdom was first published at Amsterdam, in 1740-1, and, after having lain dormant for more than a century, it must, we think, have required, on the part of the editor, no small amount of courage and enthusiasm, as well as faith in the peculiar opinions of its celebrated author, to bring a translation of it before the English public. We have here the physiology and philosophy of the early part of the eighteenth century placed in striking contrast with the advances of modern science. After having been accustomed to the researches of Lecanu, Denis, Becquerel and Rodier, on the blood, the analysis of that fluid by the Hon. Robert Boyle, comprising the weighed quantities of *phlegm* and *caput mortuum* contained in it, at once carries us back to the days of alchemy and mysticism; but we are inclined to agree with the editor, that the work should be judged as a philosophical, and not as a physiological, treatise.

Count Swedenborg, of whom all our readers must have heard, was in his day a most distinguished and accomplished man. He was born in 1683, and was the son of a Swedish bishop. Charles XII. appointed him to an office in the Royal College of Sciences; and he was subsequently ennobled by Queen Ulrica. He published numerous works on various subjects connected with philosophy and theology; and among these was the work now before us. About the same period, he adopted some extraordinary notions, to the effect that he had been permitted to have intercourse with an invisible world, and that he had seen and conversed with angels! These strange doctrines he retained until his death, in 1772.

Having thus said a word respecting the author, who was undoubtedly a man of great scientific acquirements, we shall proceed to offer a few remarks on this elaborate treatise. The two volumes before us contain an account of the composition and essence of the blood, the structure of the arteries and veins, he circulation, the formation of the chick in the egg, the peculiarities of the fœtus, the heart of the turtle, the motion of the heart, rational psychology, the motion of the brain, its structure, and considerations on the human soul; to which latter subject more than one-half of the second volume is devoted. We have here a series of iatro-theological essays, which are, for the most part, placed beyond the pale of medical criticism. Count Swedenborg appears to have been a firm believer in the existence of correspondences; *i. e.* that certain things in the natural world correspond unto and signify things in the spiritual world! Thus anatomy and physiology are invariably made subservient to this hypothesis, and are treated in a style of transcendentalism far surpassing that of the German school of metaphysicians.

After asserting that the blood "is an epitome of the riches of the whole world and all its kingdoms," he proceeds to say "how many sciences are included in that of the blood; namely, the whole circle of anatomy, medicine, chemistry, and physics, and even of physiology * * *. In a word, the science of the blood includes all the sciences that treat of the substances of the world and of the forces of nature. For this reason we find that man did not begin to exist till the kingdoms of the world were completed and that the world and nature concentrated themselves in him, in order that, in the human microcosm, the entire universe might be exhibited for contemplation from its last end to its first." (p. 3.)

We are further told that the blood is a spirituous fluid, and discharges the functions of the soul; that, by the help of the lungs, it receives "nitrous and volatile substances," and, "through the medium of the ether or purer air, substances still more volatile." Then, with regard to the blood-vessels, we have the following description:—

> "The membranes, which are several in number, correspond to the several degrees in blood; one being prior to the other, more universal, more perfect, and more simple. All these membranes, taken collectively, and connected by mutual superposition, inclose and convey the red blood; membranes, fewer in number, and more simple, inclose
> and convey the purer blood; and one
> membrane incloses and conveys the spir
> fluid. (p. 97

These passages have been taken
what the author denominates
ductions." Each sentence set
as a theorem, and is elaborately w
out by reasoning worthy of a
object.

While we quite agree with the
that it would be unfair to compa
philosophical work of a centu
with one of modern date, yet, wh
plan of examining nature adopt
Count Swedenborg, is eulogis
being far superior to that advoca
Bacon in his "Organon," whi
editor describes to be "as inef
in physics as that of Aristotle in
physics, and in fact, but a ne
cumbrance to the mind" (XII
must enter our protest against
facts being thus distorted by
flights of transcendental philoso

We have not thought it necess
extend our extracts; for, in l
through the work, we find on
side gratuitous assumptions co
in language often obscure, and
times quite unintelligible. We
some of our readers will be incli
ask whether, judging by the f
tracts already made, the autho
have been in the perfect posses
his senses when he penned the
all this arises from the creatio
system of philosophy and then ad
the facts to it.

We do not think that we s
justified in carrying our notice
work further. We regard it in a
view as the production of a clev
whose mind was overrun with
physical lore; but, in a medic
of view, we can only look up
one of the curiosities of our lit
The anatomy and physiology a
peculiar, and show, by contrast
practical researches of the pres
how easily clever men were
led away by the phantoms of th
imaginations. The work, w
well translated, may serve t
space in the shelf of the
antiquary; but we apprehend
more appropriately find patron
those who have taken up the
religious views of the author.

Proceedings of Societies.

YAL MEDICAL & CHIRURGICAL SOCIETY.

November 24th.

DR. CHAMBERS, PRESIDENT.

Remarkable Case of Injury to the Eye. y JAMES DIXON, Esq. Surgeon to the oyal London Ophthalmic Hospital.

WOMAN received a blow with a fist on left eye. The lids became much len, and she suffered great pain for e weeks, but she had no medical advice: when she applied to me, eight months · the accident, all symptoms of inflamion had ceased.

he cornea was bright and clear, but all nd it was dark, and no iris visible. On ing the upper lid, I noticed a slight k, about half an inch long, just behind upper edge of the cornea. It seemed as e sclerotic had been divided there, and rwards repaired by a substance rather opaque than the original structure. ee or four little dots, like grains of gun-der, appeared beneath the conjunctiva e to the mark in the sclerotic.

he patient kept her hand over the ind eye, finding that otherwise the light led it, so as to prevent her making good of the sound one. By means of a ex glass, I threw light into the eye, to rtain what had become of the iris: I d then look into the posterior chamber, distinctly see the surface of the retina, no vestige of iris could be discovered. eld a lighted candle before the eye, to nine the condition of the lens. A single ght image, reflected from the cornea, ved that the lens also was wanting.

ision was limited to the perception of e objects. The patient could distinguish outline of a sheet of paper, but could see the letters printed upon it. I made look though a magnifying-glass, and, to surprise, she could discern some of the er capitals. I added to the glass a card orated by a small hole, and she saw ything distinctly, and read easily a evier" type.

t appears probable, therefore, that the r which she received ruptured the coats of eye, and at the same time completely ched the iris from the ciliary ligament; the lens was dislocated and escaped, the iris, through the wound; and the in the sclerotic had afterwards healed

he most curious feature of the case is :—that after so extensive an injury, the tion of the retina should have been preserved; the vitreous humour, also, being so far retained, that the figure of the globe was but very slightly altered, and its bulk not visibly diminished.

An Account of two Labours of a Dwarf, thirty-eight inches high, with some Observations on Craniotomy, and on the Induction of Premature Labour. By HENRY DAVIES, M.D.

THE subject of the following cases was the wife of a Spanish dwarf, exhibited under the name of Don Santiago de los Santos. He was 49 years of age, and twenty-five inches high; his wife 29 years of age, and thirty-eight inches high; she appeared proportionably formed, was rather stout, and in excellent health. Her mother was a healthy country-woman, rather below the average size; her father was said to be nearly six feet two inches high, and her brothers and sisters (of whom there were nine) tall and robust.

She was taken in labour of her first child in April, 1835, when the author was called in to assist Mr. Bowden, (then of Sloane Street). After having been in labour nearly thirty-eight hours, the head had not advanced in the slightest degree, and as the conjugate diameter of the pelvis was little more than two inches, there appeared no probability of its passing entire; it was therefore perforated, and the patient was left for four hours.

At the end of this period, as the head had not advanced, the cranium, and subsequently the limbs and body of the fœtus, were extracted by means of the crotchet and craniotomy forceps. The fœtus was of an average size. Some inflammatory symptoms supervened about the third day, but they were easily subdued, and the woman was about at the end of a month. She became again pregnant in 1836, and the author having been consulted, it was agreed to induce premature labour.

On the 20th of October, the twenty-seventh week of her presumed pregnancy, the membranes were perforated, a brisk purgative having been premised. Symptoms of labour came on in twenty-four hours, and at half-past 6 A.M., October 23d, she was delivered by Mr. Bowden of a dead child: her recovery was quite satisfactory.

In his remarks on the operation of craniotomy, the author observes on the importance of its not being delayed, when all circumstances have been carefully considered, and we are convinced of its necessity. He recommends, too, that in all cases where delay is admissible, after perforation of the head, the patient should be left for a few hours, in the hope that the more-bulky part being removed, the remainder may pressed down by the pains; by this, jam ming of the cranial bones, and injurious pressure on the soft parts, are avoided, and the trunk is enabled to mould itself to the passage.

The author observes, that in the majority of cases of moderately diminished or distorted pelvis, or where the cavity is encroached upon by adventitious structures, the propriety and advantage of inducing premature labour is generally admitted. He quotes cases from his own practice, in which the operation was successfully performed; points out judiciously the various considerations to be kept in view before it is determined on, and describes the mode of its performance.

He alludes to the other methods proposed—viz. dilatation of the os uteri with the finger, and detaching the membranes contiguous to it by a gum catheter; plugging the upper part of the vagina; and the exhibition of the secale cornutum. This latter mode has in general disappointed him, though he relates one case in which he lately used it with success. He prefers the method adopted in the case of the dwarf—viz. puncturing the membranes high up, so as to keep them as far as can be entire, by which means the infant is saved from injurious pressure. This plan was adopted in nearly all the cases in which the author has performed this operation for the induction of premature labour, and of which the following is an account:—

Thirty cases, fifteen boys, fifteen girls: eighteen born alive and lived; nine still born; three died a few hours after birth. Twenty-four presented the head; four the breech; one breech and feet; and one the feet.

Dr. **Cursham** referred to the case of a lady who suffered from the presence of a large ovarian cyst, which during her pregnancy became so enlarged, that fears were entertained that it would so interfere with parturition, if the patient went to her full time, that it would be desirable to produce premature labour. This was effected at the fifth month, in the mode described by Dr. Davies, in his paper. Distressing sickness, under which the patient had laboured during the entire pregnancy, ceased immediately on delivery. Dr. Lee had at first suggested tapping in this case, but as this proceeding would again be required before delivery, it was deemed that the second proceeding might be attended with danger. The tumor had, since the delivery, (now a period of eighteen months,) remained quite stationary, and the general health was good.

Mr. **Greenhalgh** related the case of a patient, said to be suffering from ovarian disease, in whom premature labour was induced on two occasions; on the first occasion in the manner recommended by Dr. Davies; and on the second, by a plan recommended by Dr. Ashburner, of the introduction of an instrument to dilate the os uteri: in both cases the child died. In two subsequent pregnancies, labour was induced in the same manner, at seven months and a half, but assisted by the employment of the ergot of rye, as recommended by Dr. F. Ramsbotham, and in each case a living child was born.

Case of Tumor in the Groin, where the Testicle had not descended, and Operation for its Removal. By J. Moncrieff Arnott, F.R.S. Surgeon to the Middlesex Hospital.

Richard L——, forty-three years of age, admitted into the Middlesex Hospital, Nov. 3rd, 1846. In the right groin is a swelling the size of a man's fist, and of oval shape; it has an uniform surface, feels tense and firm, giving generally the idea of solidity, but at one part with an indistinct sense of fluidity; it is not diaphanous. Squeezed in every part, the sensation experienced as compression of the testicle is nowhere felt; no impulse is communicated to it on coughing. The testicle and scrotum on this side are wanting. The patient, a healthy-looking man, states that there was always a swelling the size of a nut at the lower part of his belly: four years ago, this swelling came lower down, and it has since continued to enlarge, but without inconvenience, till of late, when its size interferes with the complete flexion of the thigh. Viewing the case as one of disease of the testicle, which had not descended, but unable to determine its precise nature, the author told the patient that it would be necessary to puncture the tumor, and then to proceed according to its nature, so as to remove it if necessary.

13th.—The tumor was punctured, but blood only escaped. The integuments were divided, and inguinal canal laid open, so as to expose a purple-coloured glistening tumor, which proved to be the diseased testicle, possessing its natural relations to the tunica vaginalis. The spermatic cord was divided and the tumor removed, having a large cavity lined by the smooth tunica vaginalis. Up to Nov. 23rd, the case was proceeding favourably. A section of the mass presented the ordinary appearances of medullary sarcoma, without any trace of the natural structure of the gland. The cord appeared healthy, and contained no encephaloid matter.

The author quotes, from Dr. Curling's work on the Testicle, a notice of four cases in which a diseased testicle in the groin had been removed by operation; one, a case mentioned by Mr. Pott, two cases operated on by Italian surgeons, and a fourth by a German. The author concludes with a account of two casts, in the Museum t. Bartholomew's Hospital, of tumor in right groin when the testicle had not ended. In one of them it was presumed, n the other it was proved, to have been phaloid disease of that organ.

r. Gregory observed that the paper d that the patient was going on well: he supposed this meant as far as the nd was concerned. He begged to in- e if there were any symptoms of ab- inal disease in this case?

r. Arnott had carefully looked to the ition of the patient before the operation, n, nor since, was there any symptom ever of abdominal disease. Some lemen might think, that because this or was of a malignant character, that peration for its removal should not have performed. It was very well to make statement now; but it must be recol- d, that before the operation, the case at best but doubtful; it might have some other disease to which the testicle liable, as hydrocele, or hæmatocele, and as desirable to give the patient such a ce. Having made the incision as he and ascertained the condition of the or, he really thought it were better for patient that removal were proceeded for the wound would probably have difficult to heal, and might have been wed by bad consequences. In cases e the testicle had not descended, it was sionally the subject of inflammation; he recollected one instance, in which symptoms bore every analogy to those ernia. When the testicle had not ended, it was usually situated some- re about the external abdominal ring. h respect to the success of the ation, we knew well enough that a cure, the removal of malignant disease, was, ed, rarely to be expected. He thought, ever, in this case, that the man had a better nce of life and comfort than if the dis- d growth had been allowed to remain. ll these cases it was most desirable that disease should be removed early, because, e morbid condition had involved exten- adhesions of the tunica vaginalis, the ation became more difficult and com- ated. In the present instance, the tunica nalis was quite free from the disease.

Mr. Fergusson had lately assisted Mr. ks in the removal of a testicle in most ects similar to that exhibited to the ety by Mr. Arnott. In this case, the icle had not descended; the man was ween thirty and forty years of age; he married, and had several children. He ame affected with a swelling in the inal canal, which was presumed to be testicle in that position; and he (Mr. gusson) had no kind of hesitation in recommending its removal. It was removed. A collection of water was found in the tunica vaginalis, and the testicle presented similar appearances to that now exhibited. All the tunica vaginalis that could be seen was taken away. He agreed generally in the observation of Mr. Arnott, that in almost every instance where the testicle had not descended into the scrotum, it was near the external abdominal ring; but in some instances the testicle did not descend from the abdomen at all. Thus, in a patient he had seen with obstinate constipation of the bowels, and in whom there were some indications of the presence of hernia, the inguinal canal was cut into, but no hernia discovered. The patient died of constipation. The testicle was found in the abdomen.

Mr. Curling, after reading the case, had put this question to Mr. Arnott:—Would you, if you knew the exact nature of this case, have operated? He thought it would be gathered from Mr. Arnott's observations this evening, that he would not. The case was one of great interest, from the difficulty which surrounded the diagnosis of the disease, and of deciding whether it were hæmatocele or some other disease. The testicle, when lodged in the abdominal canal, might become the subject of disease. Cases were on record in which inflammation of this organ had come on; and one in particular, in which the inflammatory condition was the result of a kick, the patient dying of peritonitis. It was interesting that so large a tumor, in such a position, should have been removed without any great difficulty. It might be a question, if we knew that the disease were really malignant, whether we should or should not operate. Dr. Walsh was most unfavourable to operations in these cases, and, so far as the final result was concerned, he was, no doubt, quite correct in his views. But looking on castration as it really was—a simple operation—no death, that he (Mr. C.) knew, having ever occurred from it, and its being less serious and dangerous than was presumed, and that the patient might live after the operation in comparative comfort for some years, it might be doubtful if removal were not desirable. He related a case in which, twenty months since, he removed a large encephaloid tumor of the testicle; the patient recovered, and was living in comfort, which he could not have done had the disease been allowed to remain. He therefore thought, that if there were no disease in the internal organs, the operation for malignant disease of the testicle was one that surgeons should perform.

Mr. Arnott had been gratified at the relation of the case by Mr. Fergusson, which bore so strict an analogy to the one under discussion. He was well aware, that in some cases in which the testicles had not descended, they were retained in the abdomen. He had seen such cases. He questioned if he should have not performed the operation in his case, even had he known the exact nature of the disease present. He thought if the medullary disease were advancing rapidly, and going on to ulceration, and there was no evidence of disease elsewhere, it was desirable to operate. Life was, by this proceeding, prolonged, and rendered more comfortable.

Mr. C. Hawkins believed that patients lived much longer after the removal of malignant disease of the testicle than was generally thought. He related a case in which Sir B. Brodie removed such a testicle many years since; the man was still living, and in good health. In another case, five years had passed since the operation—the patient remained in good health. He related another case of four years and nine months, and one of four years' health, after such removal. The earliest case of malignant disease he had known was in a child fifteen months old; the testicle was removed, the disease returned, and the child fell a victim to it.

MEDICAL SOCIETY OF LONDON.

Monday, Nov. 23.

Mr. Dendy, President.

Dr. R. Charles Golding related the following

Case of Gangrene of part of the Right Lung (the patient still living), the Result of Common Inflammation, and unconnected with Tubercular Deposition, or Disease of the Left Lung.

The patient, æt. 17, a youth of a strumous diathesis, though unaffected with scrofulous deposits, inasmuch as the lymphatic glands and other organs of the body are deemed healthy, and the disease of the right lung to be the cause of all the symptoms present.

Though subject to bronchitic attacks, as evanescent as they were frequent, he still was in a tolerable state of health, and quite free from pectoral symptoms, till February last, when his present illness is supposed to have commenced. He was in Charing-Cross Hospital, under Dr. Shearman, for a few days at the end of April, and was discharged much relieved.

The symptoms, then, which presented were those of common pneumonia of the lower lobe of the right lung, which, after lasting a week, terminated in gangrene; the sphacelated portions were expectorated, and a vomica of moderate size (about as large as a walnut perhaps) resulted. The expectoration, though profuse, gradually diminished, with amelioration of all other symptoms; so that for six or seven months
he was convalescent, the upper
the right, and the whole of the
remaining healthy. He never ha
tysis till exacerbation of the compl
or nine weeks since, when, afte
mental as well as bodily effort,
about a pint of fluid blood: he
had exposed himself incautiously to
or three days previously, having
his occupation, relying on his alt
of health, lately so much improve
the time in question he has ha
attacks of hæmoptysis, but not pr
largest quantity of blood effused b
a pint, which occurred once since.

The present symptoms are—fev
pulse, and great general debility:
pectoration purulent, and not tub
though mixed with slough; no
appetite bad; urine, usually load
dirty yellow lithates, scanty, but f
albumen; irregular bowels; exter
phatic glands unaffected; the heart
but somewhat displaced towards t
side, from the preternaturally d
state of the left lung, and shrinkin
right.

The physical signs are as follows:

1. *By inspection.*—On the right
movements of the ribs from the s
the fifth, and below the fifth but im
acted on by the diaphragm; wh
flattened, with a slight depression u
clavicle; the cartilages of the third
and fifth ribs drawn down, and mor
than usual between the sternum a
themselves. On the left side the e
is fully and equally performed; the
flattening or deformity presented; t
side is on a plane anterior to the rig

2. *By palpitation.*—Right side:
mitus or vibration produced by res
voice, or cough, except at the ap
second rib upwards; no expansio
in latter situation. The elevation
ribs appears to be effected *in toto* by
muscular agency, and not produce
expansion from within. Above se
expansion tolerably good, though
on left side. Left side: Appears
and attended with an uniform frem

3. *By mensuration.*—The diame
right is two-thirds of an inch less
of the left side in nearly every
Not quite so much under the clavicl
distance of the mamma from th
clavicle, taken perpendicularly, is
inch greater, and from mamma to
sternum three quarters of an inc
on the right side than left side.
the depression and retraction presen
side.

4. *By percussion.* — The righ
Tolerably clear as far as third
clavicle downwards, though less

a to some extent on the left side. The ainder of the right side is so dull in every ction that no demarcation between the and liver (as to sound) can be detected.

left side: Clear, almost preternaturally in every part, indicating how fully every ion of the pulmonary parenchyma must ermeated with air.

By auscultation.—Over the entire left the respiration is puerile, but otherwise abnormal; no râle or imperfection in iration or expiration can be detected. loudness of the breathing is sufficiently unted for when the state of the right is well considered. Over the right the respiration to below the second rib uerile, more so than on the left side, mixed with cavernous breathing from large cavity occupying the other portion ung. If any râle is here presented, it is occasional, and then of a subcrepitant acter. From the third to fifth rib, in irections, and heard most characteristi- at the back, near the inferior angle of ula, all the signs of a cavity moderately with fluid are presented.

emarks.—The following were considered peculiarities of the case, and the pro- tions to be well weighed:—

The presence of the strumous diathesis such extensive disease localised to one of the lung, and unaccompanied by any rcular deposition apparently in any part he body.

If tubercular, would the disease be so (especially when its lengthened dura- is considered), and would not the upper ions (especially the left) be affected, according to Louis, as an invariable in a greater degree than in any other ?

That the disease affected the portion of usually implicated in idiopathic pneu- ; that the great constitutional de- ement consequent on profuse suppura- is sufficient to account for his unhealthy ct.

he boy was now called in and examined. was a pale strumous-looking subject, clubbed fingers.

r. **Willshire** regarded the patient as g evidence of tubercular diathesis.

r. **Bennett** agreed in this opinion. right lung had been tubercular, what- was the condition of the left at the ent period. The history of the case the aspect of the patient was confirma- of the view. Gangrene of the lung, pendent of tubercular disease, was a rare complaint: not so rare when bined with it. When gangrene was in- endent of tubercle, it came on either a very sudden and great depression of system, or from inflammation of the t acute kind, neither of which conditions obtained in this case. With respect to the use of the acetate of lead in cases of this kind, he might observe that some late writers had attributed the production of gangrene of the lung to the use of this medicine; and that therefore, when gangrene was present, its use was contra-indicated. He offered no opinion on this point, but thought that we should be cautious in the use of this remedy.

Dr. **Chowne** had administered the acetate of lead very largely in cases of hæmoptysis. He had given as much as twelve grains in one day, and never saw reason to regret its employment.

Dr. **Bennett** said that his own experience regarding the medicine coincided with that of Dr. Chowne, and he had seen no case in which it had produced colic.

Dr. **Garrod** had compared the gallic acid with acetate of lead in the treatment of hæmoptysis. The acid he thought preferable: and, moreover, it could do no harm.

Dr. **Waller** preferred the tincture of the sesquichloride of iron to the acetate of lead in cases requiring styptics, because it had no tendency to produce colic.

Dr. T. **Thompson** had given the acetate of lead to a considerable extent in cases of hæmoptysis and the obstinate diarrhœa attendant upon consumption. Guarded by a combination of opium and vinegar, it was a most valuable medicine. He had never seen in any case a tendency to the production of gangrene from the use of this medicine. He had, however, in one or two cases, seen gangrene of the lung in persons who had suffered from painters' colic. Lead, perhaps, in such cases, might produce a liability to the disease. He regarded the case before the Society as connected with tubercle, and did not think it possible that the boy could have survived the production of so large a cavity as that now in his lung, had it arisen from gangrene simply.

Dr. L. **Stewart** mentioned a case in which a large quantity of Goulard's extract of lead was taken in mistake. The only remedy was an emetic of sulphate of zinc, and the patient did well.

Mr. **Headlbard** had given the acetate of lead in considerable doses for a long period, and, when given as a styptic, had not known colic to result from its use. He regarded the gallic acid as a valuable styptic, but he had found it, even in two-grain doses, occasionally produce such dryness of the tongue, fauces, and mucous surfaces of the neighbourhood, as to occasion great distress to the patient.

Dr. **Garrod** had given the gallic acid, in doses of six and eight grains, three times a day, and had never found such results as those mentioned by the last speaker.

Dr. **Oldham**, in cases of uterine hæmorrhage, hæmatemesis, and hæmaturia, had found the gallic acid often act like a charm. In cases of large fungoid growths about the cervix uteri, and of passive menorrhagia, from the presence of fibrous tumors about to degenerate into polypi, when the bleeding seems to proceed from some open vein, the gallic acid was a most valuable remedy. He frequently employed it in doses of ten grains, three times a day, without any bad effect.

Mr. **Alder Fisher** usually gave acetate of lead in a first dose of five grains, and subsequent doses of two grains, without any ill effects. He gave opium afterwards. Gallic acid in hæmorrhage from the uterus acted like a charm.

Mr. **Hird** had found that styptics combined with opium were usually less efficacious than when given alone.

Extensive Carcinomatous Disease.

Mr. **Pilcher** briefly alluded to a post-mortem specimen which he presented to the Society. The patient was a woman twenty-one years of age, in good health. She received a blow from lifting a washing-tub on the chest. It proved fatal in a year and a half by the production of scirrhus, which, at the time of her death, implicated all the tissues and organs of the chest; the tumor measuring twelve inches from above downwards, twenty inches in circumference, and in antero-posterior direction seven inches.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Nov. 21, 1846.

Dr. Sayer, President.

Mr. **Hird** drew the attention of the members of the Society to some points in the

Pathology and Treatment of Croup.

He considered it to be a disease of an inflammatory character, although differing widely from ordinary inflammation occurring in mucous membranes. He was of opinion that the disease was of a truly specific character, being almost exclusively confined to children, and being remarkably prevalent in some families more than others. Its aptitude to recur in the same individual, and the membranous or albuminous exudation depending more upon the superabundance of fibrine and albumen in the blood, than on the acuteness and violence of the inflammatory action, also favour this view.

The purely spasmodic constriction of the glottis, evinced by crowing respiration, chiefly observed after sleep, which is of short duration, and unaccompanied by febrile or inflammatory symptoms, and which depend upon a peculiar irritation of the laryngeal nerves, he considered ought not to be confounded, either in p or treatment, with true croup.

In examination of fatal cases, wh patients survived the attack only a hours, and in which the inflam symptoms were the most severe, he served only slight traces of alb exudation, the mucous membrane of trachea and larynx presenting a red swollen appearance, and being covered a tenacious and sanguineous frothy When death occurred two or three after the commencement of the attack, where the inflammatory symptoms, fully developed, were of a less acute ch ter, a pseudo-membrane, of a greyish- colour, and about a line in thickness, cupied either the trachea only, or trachea, larynx, and bronchial tubes. some cases a viscid muco-purulent se adhered to the mucous membranes of air-tubes. In the air-cells and parench of the lungs a reddish serum was freq found; hepatization also was occa observed. The croupy membrane, stated, may adhere throughout its extent to the mucous membrane of air-passages, or hang loose from a p like a polypus, or attached in the and free at one or both extremities, may be completely separated from mucous membrane by a muco-purulent cretion.

In the treatment of croup, Mr. stated, that during the last four or five he had never resorted to general letting, and that he was induced to this course from witnessing the unfavou result which generally followed its use, b in his own practice, and in that of som his professional friends. Croup he siders an inflammation of a ch bearing some analogy to erysipelas, or inflammation occurring in scrofulous viduals, which occasions the formation of pseudo-membrane that will require for its removal a certain amount of vital both in the respiratory organs and in system generally. The inflammation croup he believes to be less under influence of bloodletting than healthy flammation, and that, whether it be upon in reference to the alteration expected from it on the progress of or on the subsequent effects of the tion on the system, it will be found unsatisfactory and dangerous.

The class of cases in which he occasi prescribes leeches, or a cupping-glass to chest, are those acute affections in there is not the same disposition to formation of a croupy membrane, and which the larynx is affected. The infla mation, he considers, approaches more the character of healthy inflammation,

under the control of bloodletting, and
pt to cause effusion near the glottis,
h speedily proves fatal.

the early stage of both varieties of the
e—*i. e.* both in the ordinary tracheal
e, as well as in the more acute affection
hich the larynx is affected, he gives, in
irst instance, an antimonial emetic, the
varying from a quarter of a grain to a
, according to the age of the child.
vomiting has been produced, he orders
grains of calomel, and if necessary,
ts the dose, that the bowels may be
acted upon. If by these measures the
e and inflammatory symptoms are in
degree subdued, he finds the greatest
it from the free use of the alkalies.
ong, however, as the fever continues
ated, and the heart's action unsubdued,
eeps up the state of nausea with a
ion of the potassio-tartrate of antimony,
oses varying from the twelfth to a
r of a grain every half-hour or hour,
a decided check to the symptoms is
uced. As a local application to the
t, he advises a flannel bag half filled
hot salt, as recommended by Mr.
y, of Dublin. The warm bath, and a
r between the shoulders, or on the
um, for an hour or two, are often of
assistance. Mr. Hird considers that
alkalies act by allaying the irritation
h produces the paroxysms of spasm, in
ame manner as they allay the cough in
ing-cough; and that they are as valu-
in promoting the absorption of the
minous exudation thrown out in this
se, as they have been proved to be by
B. Brodie in the removal of large fatty
rs occurring in various parts of the
. He prescribes ten or fifteen minims
e liquor potassæ every four hours, or in
ler doses more frequently repeated. At
er period of the disease, he gives the
ction of senega, combined with ipeccau-
, squills, and ammonia.

he discussion which ensued, and in which
eat number of members took part, had
ence chiefly to the treatment of the
tion, and of the employment of blisters
young children. Some practitioners
ent upheld depletion, others condemned
some were in favour of blisters as the
t valuable of all remedies in inflamma-
diseases of the chest, in children, whilst
rs reprobated their employment as dan-
us.

SOUTH LONDON MEDICAL SOCIETY.

November 26, 1846.

rles Waterworth, Esq. President,
in the Chair.

. **Searle** brought before the notice of
ociety, the subject of *serous apoplexy*: he remarked that cases frequently terminated fatally from being treated as sanguineous apoplexy, when in reality they were only instances of syncope. He alluded also to newspaper reports of coroners' inquests, where individuals had died in half an hour to an hour, and a verdict of apoplexy given, and after death no effusion of blood was found in the brain.

He argued that few cases of apoplexy terminated in one hour, and that even in the worst cases, where the central portions of the brain have been found in a pulpy state, and the hæmorrhage copious, the patients have survived *two* or more hours. In such cases the coroner's verdict of apoplexy was improper, and should rather be that of syncope; here especially a post-mortem examination was highly necessary. When such was obtained, instead of blood, serum was often found effused into the ventricles of the brain, together with turgescence of the superficial vessels, and it was then considered to be a case of serous apoplexy.

He was, however, of opinion that the effusion of serum never occurred with such violence as to produce sudden death; in other words, there was no such thing as serous apoplexy.

There was no affection of the brain, which could destroy life instantly, but syncope, and even those cases of apoplexy which are sudden in their accession, he maintained did actually commence in syncope, and terminate in apoplexy.

In confirmation of these views he related the following case. Mr. A. aged 55, corpulent, had been many months in a state of considerable anxiety, more particularly on the day of attack. In the evening, experiencing great pain in the gums, he applied two leeches, during which time he was seized with loss of consciousness and stertorous breathing. A medical gentleman in the neighbourhood was called in prior to Mr. Searle's attendance, and considering it a case of apoplexy, proposed general and afterwards local depletion, which were objected to by the patient's wife, knowing his (Mr. Searle's) objection to bleeding in diseases of the brain. The circulation being low, a small quantity of brandy and water was given, and afterwards some wine, the patient then becoming more conscious, and the breathing less stertorous. At the time of Mr. Searle's visit, half an hour after the seizure, he still presented most of the appearances of apoplexy, the head, neck, and chest being swollen and highly suffused from venous congestion; when not spoken to his respiration was a little stertorous, and although he would answer questions correctly he was disposed to ramble. He was at this time supported in the sitting posture, when Mr. Searle had him removed into bed, if the patient had died, and on a post-mortem examination no coagulum had been found in the brain, it would have been deemed serous apoplexy ; a condition which he believed did not exist, and that it was in reality a case of syncope.

Dr. **Silvester** inquired if the patient had been the subject of a previous attack, and if the urine was albuminous ?

Mr. **M'Donough** remarked, that he had never seen a case of syncope with stertorous breathing.

Mr. **Searle** replied, that he had not examined the urine ; such cases of syncope were not unfrequent after large bleedings, and the means of cure were stimulants and the recumbent posture, which latter he regarded the chief means of diagnosis, as syncope was relieved, and apoplexy aggravated by its adoption.

Dr. **Barlow**, alluding to the confusion of terms employed, maintained that they should be more defined in Mr. Searle's distinction of syncope and apoplexy ; to which that gentleman replied, that syncope consisted in deficiency of blood in the brain, lessened pressure, and consequent cessation of the cerebral functions ; apoplexy in the rupture of a vessel, followed by loss of consciousness, and paralysis.

Dr. **Barlow** regarded syncope as failure commencing at the heart, apoplexy as failure commencing at the brain, according to Dr. Alison's views, and that the heart and respiration failed from the loss of innervation.

Dr. **Chevers** remarked, that patients of the apoplectic diathesis are liable
tacked with syncope ; in illustratio

plectic nature, no
deficiency of bloo
tion of the nervo
Mr. Searle had
too wide a sense.

Dr. **Barlow** i
person was sudde
ness, and died,
blood or effusion
he infer it to be a

Mr. **Searle**
straining effort h
not be too much b
softening predisp
Dr. Chevers's cas
not carry on th
paralysis occurre
the sudden effu
He believed that
one of syncope,
duced the ruptur
morrhage. He b
in an epileptic w
attack of epilepsy.

Dr. **Gull** allu
hypertrophy of th
plexy. He relate
dependent, as seen
smash in the pons
of a tumbler, wh
minutes. These
apoplexy, similar
quiring a differen
that indicated in t
old people, and w
cumbent posture :

as much difference in cases of apoplexy; nd Mr. Searle's distinction in reference to eatment was most important, as, although ey are essentially apoplectic, these cases ill not bear depletion. With regard to what ad been said on the subject of renal cases, he new from experience that hemiplegia might ccur, and yet no extravasation of blood, or fusion of serum, be found; in support of hich he related the case of a renal subject ho had become suddenly paralysed, and fter lingering six weeks, there was only ound a cluster of thickened arteries and oftening, but no extravasation. (In this ase, Dr. Chevers stated that there was neurism of the aorta and obliteration of he common carotid which corresponded to he diseased hemisphere.) Dr. Barlow believed that cases of serous apoplexy do occur n which serum is poured out suddenly on he surface of the brain, as remarked by M. Beau, and designated by him serous polyhæmia: here bleeding was improper, and would increase the mischief.

Mr. **Hicks** urged the importance of carefully discriminating between the cases of apoplexy which require bleeding, and those which indicate an opposite plan of treatment. In reference to the existence of stertorous breathing in syncope, he alluded to a chlorotic and anæmic patient, who suddenly fell, and had stertorous breathing, and in whom after death a pale and bloodless condition of the brain was discovered.

Mr. **Swete** alluded to the occurrence of syncope in persons who had abstained from stimulating drinks after a previous opposite course.

Mr. **Searle** was surprised that the term syncope was objected to in this case, as no immediate cause had been given for the production of such cases: he considered that, in cases of cerebral softening, any slight dimunition in the quantity of blood supplied to the brain would cause paralysis.

Dr. **Murphy** considered that the distinction between syncope and apoplexy was obvious, and did not admit of a mistake in the treatment.

Thanks were then given to the author of the paper, after which the Society adjourned.

At the next meeting Mr. Crisp will bring some remarks before the notice of the Society.

MANCHESTER PATHOLOGICAL SOCIETY.

Nov. 6th, 1848.

Acute endocarditis—inflammatory coagulum in left auricle—pulmonary apoplexy—enlarged heart—ossified mitral valve.

Dr. Watts presented the heart of a man, aged 37 years, who died from obstruction to the passage of blood and uncontrolable hæmoptysis, caused by idiopathic endocarditis, and inflammatory coagulum in the left auricle.

The heart was twice the proper size. The mitral aperture was much constricted, the valve ossified, the valve-lips gaped partially and permanently open, the valve-tendons were thickened and hard as fish bones. In the left auricle a large coagulum was found adhering to the endocardium by a gluey coating of coagulable lymph. Though the endocardium was opake and thickened throughout, it was more thickly coated with recent false membrane in the aural appendage, in the vicinity of the mitral aperture, and in the entire ventricular aspect of the auricle, than elsewhere: in these parts, too, the coagulum was much the most firmly attached. There were three canals through which the blood flowed from the pulmonary veins into a small cavity in the interior of the coagulum, and thence by the mitral aperture into the ventricles.

Lumps of pulmonary apoplexy were found in the upper and lower lobes of the left lung; both lungs were also generally congested with blood, but not œdematous. The liver was enlarged, and a good specimen of the nutmeg liver. The spleen was slightly indurated; all other parts were healthy.

The patient drunk hard of beer, and undermined a hale constitution by debauchery. Four years ago he had rheumatic fever, and a year afterwards a second attack. Two years ago he began to suffer from palpitation of the heart and shortness of breath attended with cough; for the last seventeen months he had been more or less unwell, for the last ten months dropsical, and the cough and dyspnœa so much worse as to unfit him for work. He came under treatment, Sept. 5th, for heart disease, complicated with chronic catarrh, hepatic derangement and general dropsy; there was no indication of an early fatal termination: the pulse was regular, moderately full, and firm. The catarrh diminished, the breathing became comparatively easy, the dropsy disappeared, the assimilative functions were being more correctly performed, and he was apparently improving in every respect.

On Sept. 30th, however, he committed a great indiscretion; exposing himself to fatigue and the inclemency of the weather, he was seized with extreme dyspnœa, shivering, debility, and increase of cough, followed by expectoration of pure blood and relapse of dropsy. Dr. W. was not sent for until the 5th day of this attack; the patient was then oppressed with anxiety for breath, cold to the feel, damp with sweat; he spoke with difficulty in interrupted syllables; the pulse was most irregular, intermittent, excessively feeble, sometimes barely perceptible; a loud bellows-murmur was audible all over the cardiac region; the chest expanded well, the respiration seemed mechanically perfect, sounds of congestive catarrh were alone heard in the lungs; he coughed occasionally; the sputa were pure blood. The death struggle was prolonged; he became comatose, and expired on the 7th day.

Dr. Watts remarked, that the occurrence of inflammatory coagula like the present is supposed to be a great rarity.* The formation of analogous coagula secondary to phlebitis, erysipelas, and extensive ulceration, is common enough; but inflammatory coagulation of the blood in any of the cavities of the heart, from idiopathic endocarditis, without inflammatory, suppurative, or ulcerous disease in some other part of the body, is very uncommon; at least, it has been comparatively seldom verified by post-mortem examination. If it be found really to occur more frequently than the literature of our time represents, so much more would its importance be enhanced. But even now the formation of inflammatory coagulum, from rheumatic or simple endocarditis, is a highly interesting fact in the natural history of disease, by its bearings on diagnosis and the practice of medicine.

The present case possesses this interest, if not practically indicative, it is at any rate peculiarly suggestive, respecting the treatment of hæmoptysis in similar cases; it seemingly shows the remedies must be directed against the acute disease of the heart, to succeed in arresting the flux of blood. Confidence would be, in such instances, more properly reposed in antiphlogistics and mercury, than in astringents and acetate of lead; for, judging from the condition of the heart here, the only hope we can reasonably entertain of stopping the hæmorrhage would appear to rest on the application of general, or local antiphlogistic treatment, assisted, according to circumstances, either with contrastimulants or with stimulants.

Cauliflower disease of the uterus.

Mr. Whitehead presented the uterus and its appendages of a woman who died from the effects of disease of the uterus of the cauliflower variety. The tumor which, six months previously, had occupied the entire cavity of the true pelvis, had almost disappeared several weeks before death; leaving, however, an uneven ulcerated surface of malignant appearance, studded here and
there with nodules of the origina
in form of large granulations, t
continuing to secrete a thick sanio-
matter emitting a peculiar and ve
sive odour.

The fundus and body of the ute
of the ordinary unimpregnated
cervix was thickened, the labia h
expanded into the irregular surf
mentioned, whence the malignan
had originally issued. The sub-te
the adjoining walls of the vag
loaded with hard granular fat, so
tions of which appeared to have u
the malignant degenerescence. T
of this adipose tissue was very vasc
arteries especially being large and
their coats thickened and of carti
hardness.

The left ovarium was the size of
walnut, very hard and lobulated, a
one of these lobules sprang out
which had acquired the dimensi
fœtal head of seven months growt
tumor, which had a thick shinin
consisted of a finely granular matte
consistence and appearance of th
matter of brain. It had insinuat
between the common iliac vessel
were embedded in its substance pos
and the psoæ muscles which were s
along its anterior and outer aspect,
the lumbar plexus and anterior crura
running upon their surface. It
versed by a great number of vess
thickened coats, of considerable si
some enlarged nervous filaments we
traceable upon it. The corres
fallopian tube was enormously diste
its whole length, the diameter of its
being about three quarters of an inc
very unusual product of disease, f
convoluted arrangement of the vis
the adhesion of its sides to each
places where they had been brought
tact, and also its morbid attachmen
adjacent surface of the ovarian tum
it, at first sight, the appearance as
ing an integral part of this body;
adhesions being broken down, and
volutions unravelled, the tube w
gated into a soft cylinder of the thic
a man's thumb, and of a pearly wh
Its fimbriated extremity was soft an
and looked like the surface of a gra
ulcer. The outer two thirds of t
were filled with a soft cerebriform su
and its inner third with a fluid res
pus, which gushed out upon an
being accidentally made through its
A number of enlarged vessels and f
of nerves were seen joining the tu
its fimbriated extremity.

Changes of a precisely similar
in the incipient stage, were

---

* Coagulation of the blood within the heart, as a consequence of acute endocarditis, is a phenomenon of which I have no personal knowledge, because I have never witnessed a fatal case of this affection.—*Hope on the Diseases of the Heart*, p. 211, lines 4—7.

organs of the opposite side. The right ovarium had the dimensions of an ordinary sized bean, being very distinctly lobulated. One of its lobules, larger than the rest, was indurated, and to this the corpus fimbriatum of the corresponding fallopian tube was morbidly adherent. The two outer thirds of the tube itself were dilated to at least ten times the ordinary dimensions; its walls being thickened and highly vascular.

There can be little doubt, judging from the relative morbid anatomy which must have existed in the fallopian tube and the ovarium respectively, that the disease commenced in the former; and the same inference may be deduced in reference to its first stages on the left side.

The patient, a widow in easy circumstances, was 56 years of age, and mother of seven children, the last of whom she bore wenty-three years ago. The catamenial functions declined in her 47th year without marked constitutional disturbance. Some months before this period a slight leucorrhoea showed itself, and the discharge, which afterwards became increased, was alternated by bleeding piles. Twelve months ago the first symptoms of cauliflower disease were noticed, beginning with a sanguineous discharge, which, after continuing eleven or twelve weeks, was replaced by one of a light brown, offensive, and copious watery appearance, characterising this form of disease. Examination by means of the touch and the speculum discovered the tumor, which was of a spheroidal shape, and firmly impacted in the pelvis. Its surface was lobulated, of a salmon colour, extremely brittle, and insensible to pain on pressure. The above was not, however, the real colour of the diseased mass, small portions of which became occasionally detached, falling into the speculum during examination. These fragments were semi-transparent, of a light ash colour, and soon subsided by pressure between the finger and thumb into a thin glairy pulp. The vaginal canal was highly sensitive, and the cervix of the uterus slightly thickened and smooth.

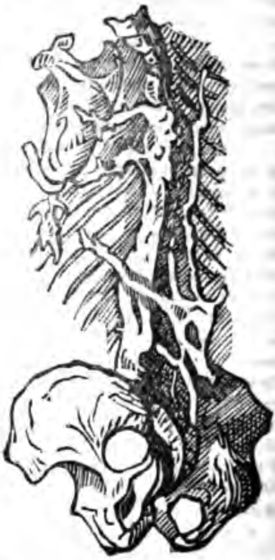
The treatment consisted principally in the administration of alterative and tonic medicines, with due attention to the urinary and alvine functions, and in the periodical application of nitrate of silver and nitrate of mercury to the surface of the tumor by means of the speculum, which was introduced for this purpose every six or seven days. In a few days the symptoms were greatly alleviated, the discharge diminished, and the tumor decreased in size. In five months the tumor was reduced to the size of a small orange, and had an excavated centre. The discharge was no longer profuse and watery, *but purulent and* comparatively scanty. At this period she began to experience œdema of the left lower extremity, with violent sacral and lumbar pains, particularly on that side, the causes of which are adequately explained by the post-mortem appearances in the left ovary.

Mr. Whitehead commented on the somewhat novel use of the speculum and escarotics in cauliflower disease, as well as the good results that appeared to attend the practice. The existence of cerebriform disease in the ovary was likewise an interesting feature, because it served to strengthen the opinion that cauliflower excrescence was malignant in its nature and origin. The circumstance of the long contained vaginal and rectal discharges indicated an obstruction to the return of blood from these parts, leading inferentially to the belief that there existed an irritable state of the uterine organs, accompanied probably by breach of surface of the lower part of the uterus, strongly predisposing them to take on some specific form of disease.

Conversion of large muscles of the trunk, neck, and arms, into bone.

Dr. Wilkinson presented the skeleton of a young woman where many of the large muscles had become ossified through pathological changes. The sternum was arched outwards, the body and manubrium were still connected by cartilage, and the different portions which form the body of the bone at an earlier period were not yet completely united by osseous matter. The right compartment of the chest was much diminished in size, both from the curvature of the dorsal vertebræ and the natural angles of the ribs being changed from an obtuse to a very acute angle. The anterior part of the upper rib of this side was only separated by one finger's breadth from the spine, and the anterior edge of the sixth rib approached to within two inches of the spine. The costal articulations were natural, and the ribs themselves, with the exceptions already and immediately to be mentioned, were not altered in their external form.

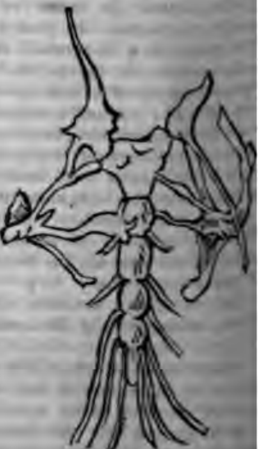
Besides numerous thin ossific plates in muscles on the anterior and posterior surfaces of the chest, particularly in the pectorales, latissimus dorsi, and erectorides spinæ muscles, there were also several irregular-shaped bands of ossific matter in those muscles, which were arranged as follow: one about 10½ inches in length, and varying from $\frac{8}{10}$ to 2 inches in breadth, and from one to four lines in thickness, was attached by short tendinous fibres to the crest of the left ileum, and about 1½ inch from the posterior and superior spinous process, and after running up along the side of the spine was connected to the points of the spinous processes of the dorsal vertebræ from the seventh to the second, also by short tendinous fibres.



From the outer edge of this band at the upper part two irregular and shorter bands of osseous matter, placed in the rhomboidei muscles, ran to the base of the left scapula, to which they were connected by tendinous fibres, and were prolonged for a short distance into the substance of the infraspinatus muscle. On the right side of the spine, an osseous band, varying from one quarter to half an inch in breadth, and from two to three lines in thickness, lay nearly in the position of the larger band on the left side just described. It was attached by tendinous fibres below to the posterior part of the crest of the ileum, and above to the points of the spinous processes of the seventh dorsal vertebra, and the transverse processes of the third, fourth, fifth, and sixth dorsal vertebræ, and the dorsal ends of the corresponding ribs of that side. A very irregular band of bone extended from the eleventh dorsal vertebra to near the middle of the sacrum. It was flattened from before backwards, extended transversely, and adhered to the points of the spinous processes of the two last dorsal and five lumbar vertebræ, and a small part of the sacrum also, by short tendinous fibres. From each of the outer edges of this last band two other bands passed outwards to the longitudinal bands along the spine. The upper of these on the left side was continued upwards
and outwards behind the longitudi
in the fibres of the latissimus d
terminated in an irregular swelling

external surface of the ninth and
Another very irregular plate of b
where this last band terminated,
closely to the outer surface of th
and eighth ribs, and proceeded to th
angle of the scapula, where it
itself to a portion of bone about
in length, adhering by means of
nous fibres to the inferior ang
scapula, and lying in the substan
teres major muscle. The left
firmly fixed to the external surfa
ribs by these different bands of
the bodies of the vertebræ were
without ossific effusion on their
face: there were no traces of
former caries of these bones, and th
vertebral cartilages were healthy
osseous swelling or exostosis proje
the outer surface of the sixth ri
right side near its middle, and a sma
from the outer surface of the ninth

Several bands of ossific matter fr
to four inches in length were plac
the fibres of the pectoral muscles
sides, and their internal ends were
to the anterior surface of the ster
the cartilages of the upper ribs, and
sternal end of the clavicles. Two
on the left side were connected to the
by ossific union.



The right pectoralis muscle wa
changed into ossific matter, and th
taken place to a considerably great
in the clavicular than in the sternal
While the whole of the clavicular p
this muscle, except at its origin a
tion, had undergone this change, th

the sternum; and another was placed in the lower fibres, where they assist in forming the anterior fold of the axilla. The left pectoralis major muscle contained a considerably greater quantity of ossific deposit than the right. The clavicular portion of this muscle was bony, both at its origin and insertion. The tendinous fibres in which the sternal portion terminates has also undergone this change; so that the whole tendon of the muscle had been replaced by ossific deposit, which adhered to the anterior edge of the bicipital groove of the humerus. The right sterno-cleido mastoideus was almost entirely replaced by ossific deposit. Its upper attachment remained tendinous, and the sternal portion of its lower attachment was also tendinous, while the clavicular portion of the same attachment was completely composed of ossific matter, which was continuous with the upper edge of the clavicle in front, while traces of a tendinous junction between them were still observant on the posterior surface. A portion of this had been once removed by operation, but was shortly replaced. The left sterno-cleido mastoideus contained no bony matter, except a small process at its lower ear, which projected from the posterior surface of the clavicle. Its muscular fibres were pale and attenuated; numerous bands and masses of ossific deposit were placed in the muscles which depress the lower jaw; but circumstances prevented this part of the dissection being made with proper care.

A portion of bone, about an inch in circumference, was connected to the point and anterior edge of the coracoid process of the right scapula, occupying the place of insertion of the pectoralis minor and origin of the coraco-brachialis, and short head of the biceps flexor muscles, which branched into two processes, each about two inches in length, one of these lying amongst the fibres of the short head of the biceps and coraco-brachialis muscles. A portion of bone, about two inches and a half in length, was found surrounded by the muscular fibres of the left biceps flexor cubiti muscle.[*] Two very irregular processes of bone projected from the lower end of the left humerus, to which they were attached by ossific union; one of these adhered to the internal condyle, and projected downwards for three inches in the substance of the pronator teres and flexor muscles of the fore arm; the other was attached to the outer edge and posterior surface, about three inches above its lower extremity, and projected downwards for two inches in the substance of the triceps extensor and extensor carpi radialis longior and brevior. No morbid changes upon any articulations of the body. The external surface of the anormal ossific structure was cleaner and smoother than the natural bone, and it was also denser and harder. The pelvis appeared to have undergone no morbid change, and had rather the configuration of the male than the female; the heart and arterial system were everywhere healthy; the uterus was small.

The girl, when 8 months old, first had stiffness in the arms, and lumps were discovered on the back. Up to 11 years of age she could run about and perform many domestic offices. Shortly after this period she lost the power of flexing the elbow joints, and the other morbid processes increased rapidly. When 19 years old she was seized with catarrh, which continued chronic until the age of 21, when she died of pneumonia, contracted through exposure to cold and damp.

There were no post-mortem evidences of tubercles in the lungs. Her mother died of phthisis in the 44th year of her age, and she lost a brother at the age of 19 years, of the same disease. The father is yet alive, a strong and healthy man.

Aneurism of the Ascending Aorta.

Dr. Cassels presented a large aneurism of the aorta, which originated from the anterior aspect of the vessel, about an inch from the aortic valves: stretching thence across the mediastinum, it had passed out of the chest in the situation of the left mamma, where it ultimately ruptured, after having caused the absorption of portions of four ribs and a part of the sternum. The interior of the sac was thickly coated with pale laminated coagula, and about the rupture there was much recently clotted blood. The sac did not appear to have pressed upon certain important parts in its neighbourhood; hence the absence of any symptoms indicating disturbance of their functions.

The patient was 42 years of age; rather pale, but in general appearance healthy; she was stout and active, had a good appetite, a strong voice, and breathed with ease when in a state of quietude. She had enjoyed good health till within a few months of coming under treatment, when a dull pain fixed in her chest, attended with dry cough and more or less dyspnœa on exertion. A pulsating tumor, about the size of an orange, appeared below the left clavicle, near the margin of the sternum. It was compressible, tender on pressure, and pulsated synchronously with the radial pulse. There was dulness of percussion around the tumor; the resonance of the rest of the chest was clear, and the respiratory murmur healthy. Pulse 80, full, and equal in both wrists.

The tumor increased slowly for a length

---

[*] This portion was examined microscopically by Mr. John Goodsir, *and was found to contain all the elements of true bone.*

of time, and the general symptoms did not become more urgent, with the exception of her experiencing acute pain between the shoulders, and numbness of the left arm. During the month preceding the decease, however, the progress of the disease was rapid, and the tumor greatly increased in size; the suffering became aggravated, and the breathing quicker and laborious. The day before her death the tumor was discoloured and sloughed; in the night half an ounce of blood oozed out. She died early next morning, in a state of extreme exhaustion.

Correspondence.

ON GUTTAPERCHA SPLINTS.

BY ALFRED SMEE, F.R.S.
Surgeon to the Bank of England, and Lecturer on Surgery at the Aldersgate School of Medicine.

At the introductory address to the Medical Society of King's College, I called attention to a novel surgical application of the new material called guttapercha. I have employed this substance when rolled out into tablets for the formation of splints, similar to those which I described as being made from the moulding tablets, in the Medical Gazette and Lancet for the year 1839. It has advantages over the moulding tablets, which I there described, inasmuch as tablets of this material rolled to the required thickness are more easily moulded into the required form when soaked in hot water. It has moreover advantages in its being impervious to and uninjured by water, alcohol, æther, acid, and alkaline solutions, and therefore especially applicable to interrupted splints where an aperture is required to be left for the application of these substances.

It is not so good, however, as the moulding tablet, inasmuch as it retains the perspiration, whilst the moulding tablet transmits it. This difficulty may be overcome by puncturing numerous holes in the guttapercha, or by lining it with a piece of thin lint, which allows the perspiration to escape. If the perspiration is retained it irritates and excoriates the skin.

I have employed this substance for fractured limbs and diseased joints. I have also found it of great value after the division of tendons for contractions, and in cases where pressure or counter-pressure are to be employed, as the force may be then distributed over a large extent of the body.

The moulding tablets for fracture are, in my opinion, not so much employed as they deserve to be, solely, I believe, because surgeons do not like the trouble of the preparation. Under these circumstances I hope that guttapercha tablets will lead to a far more extensive adoption of this form of splint.

Finsbury Circus, Nov. 18th, 1846.

TREATMENT OF DISEASES OF SKIN.

Sir,—I have been attracted by a few remarks which appeared in last week's Gazette, concerning the nature of lichen, prurigo, and impetigo, attributed to M. Cazenave. It is much to be regretted that the true nature of skin diseases is not more accurately followed out.

But it appears that less is written, and less known, concerning eruptive diseases than almost any other branch of medical knowledge; and this is the more to be lamented, inasmuch as skin disease is one of every-day occurrence, is both painful and disfiguring, and is moreover exceedingly difficult of cure.

M. Cazenave thinks that lichen and prurigo consist in an inflammatory condition of the nerves of the skin; but that impetigo is allied to scrofula, and results from a totally different cause, viz. an inflammation of the absorbents. Now if this be the case, how is it that lichen becomes impetigo, as it so frequently does; and how is it that both lichen and impetigo become scabies?

Scabies, I think, is neither allied to scrofula, nor is it an inflammation of the nervous structure of the skin, with an accidental eruption.

With regard to impetigo, I think M. Cazenave right in supposing it like scrofula, inasmuch as this affinity is shewn by the tendency of impetigo to become hereditary, and to run in families. I know a family where several forms of impetigo exist, in their worst and most incurable state: in one it is impetigo figurata; in another impetigo sparsa; and although all remedies have been tried, none have succeeded in curing, and scarcely any in alleviating them.

I am, sir,
Your obedient servant,
H. C. B.

ACTION OF CAMPHOR ON THE TEETH.

Mr. Tibbs of Cheltenham has forwarded to us the following note from Mr. Herapath, respecting the action of camphor on the teeth.

Sir,—Having received from you a request that I would subject human teeth to the action of camphor, so as to ascertain whether that substance had any, and, if so, what effect upon them, I have to announce to you that I have made a long series of experiments with that view, operating upon teeth whole, and in their sections, with camphor in water, spirit of wine, and human saliva, at all temperatures, between 98° "blood heat," and 110° fever heat," and with, and without, a current of [illegible] pheric air: the action has been continued without interruption for ten days, and the result is that camphor has *no* injurious action on either the enamel or on the bony part of their structure.—I am, sir,

Your obedient servant,

WILLIAM HERAPATH.

Bristol, Nov. 16th, 1846.

⁂ The real question is, whether the continued application of camphor for *months* or *years* will produce an effect not perceptible in a few days or weeks. Our own experience is decidedly against the theory which has been lately propounded. We have known strong spirits of camphor employed as a dentifrice for many years without injury to the teeth; and as camphor is a perfectly neutral body it is not easy to perceive how it can affect the hard and closely aggregated phosphate and carbonate of lime of which the teeth are composed.

Medical Intelligence.

ANNIVERSARY MEETING OF THE ROYAL SOCIETY.

THE Anniversary Meeting for the election of the Council and Officers of this Society for the year ensuing, was held on Monday last, Nov. 30th; the Marquis of Northampton, President, in the chair.

The President congratulated the members upon the prospects of the Society, intimating that certain changes were in progress for its improvement, but that nothing had yet been definitively settled. The past year had been marked by some great scientific discoveries, the most remarkable being that of the addition of another planet to our system by the researches of an eminent French mathematician, M. Le Verrier; although some credit was due to a countryman of our own, Mr. Adams, for the calculations which had led him to predict the part of the heavens where the planet would be found. For this discovery the Society had awarded the Copley Gold Medal to M. Le Verrier. The noble President then presented the medal to Sir J. F. Herschel, who had been appointed to receive it. A Royal Gold Medal and the Romford Gold Medal were awarded to Professor Faraday, and the second Gold Medal to Professor Owen; to the former for his researches on magnetism, and to the latter for his paper on the "Belemnite."

The Secretary then read the Obituary list for the past year, which included the names of several eminent medical men; among others those of Dr. Bostock and Dr. J. Thomson. The ballot was then taken in the usual way for the election of the Council and Officers. The meeting was attended by a large number of scientific men.

UNIVERSITY OF LONDON.

EXAMINATION FOR THE DEGREE OF DOCTOR OF MEDICINE, 1846.

THE following candidates have lately passed this examination:—

First division.

Brown, Frederick J. University College.
Francis, D. J. T. Guy's Hospital.
[*] Gull, William Withey, Guy's Hospital.
Hindle, Richard, University of Edinburgh.
Hudson, J. Leeds, and University College.
Nevins, J. B. Leeds, and Guy's Hospital.
Noyes, Henry George, Guy's Hospital.
Parkes, Edmund A. University College.
Topham, John, University College.

Second division.

Blake, James, University College.
Carey, John, Richmond Hospital, Dublin.

UNIVERSITY OF CAMBRIDGE.

GONVILLE AND CAIUS COLLEGE, CAMBRIDGE.

SUBJECT for the "Thurston Speech" to be recited on the 11th of May:—"*Additions to Chemical Science since Dr. Wollaston's time.*" The premium of £18 is to be given for the best composition sent by members of the College being Bachelors of Medicine or Licentiates.

MIDDLESEX HOSPITAL.

DR. R. G. LATHAM has been elected to the office of Assistant-Physician to the Middlesex Hospital, in the place of Dr. Seth Thompson, who has resigned.

WESTMINSTER HOSPITAL.

MR. ANTHONY WHITE has resigned the office of Surgeon to the Westminster Hospital, and Mr. B. Phillips has offered himself as a candidate to supply the vacancy. Mr. J. Erichsen, Mr. B. W. Holt, and Mr. C. G. Guthrie are candidates for the office of Assistant-Surgeon, rendered vacant by the resignation of Mr. B. Phillips.

ALLEGED APPEARANCE OF THE ASIATIC CHOLERA IN SYRIA.

A REPORT has been circulated that the cholera had made its appearance at Aleppo and Damascus. From the latest French medical journals, we learn that there is no truth in this statement. The last packet brought no account of its having reached Syria. As we stated in our last number, the disease had appeared at Tabriz (Tauris), a city on the Persian frontier about 200 miles to the west of the Caspian Sea. This, so far as we can ascertain, is the nearest point to Europe where this pestilence is now committing its ravages. Great fears were entertained that it would spread onwards through Turkish Armenia to Erzeroum and Trebizonde. It is remarkable that the pestilence should have passed from Teheran in two widely different directions—north-west to Tabriz and Astrachan, and south-west to Bagdad. From this last-mentioned city it has extended itself to Bakouba, Kerbla, and other towns on both banks of the Tigris.

---

[*] To Dr. Gull was awarded the gold medal for a commentary on a case in medicine.

It is stated, that blood-letting has been found a very effectual mode of treatment in Persia. Thus it is reported that out of 400 soldiers attacked with cholera, and treated in this way, only 10 died! Knowing, however, the great mortality of this disease (nearly 30 per cent.) under all forms of treatment, we are disposed to believe that there is either a mistake in the figures, or that the disease for which depletion is stated to have been so very successful was not Asiatic cholera.

THE MEASLES AT ANTWERP.—DIMINUTION OF ZYMOTIC DISEASES IN THE METROPOLIS.

Rubeola is at present spreading in an epidemic form at Antwerp. The disease is represented to be mild in its character, but what is somewhat remarkable is, that it appears to attack equally adults and infants. This disease is much less prevalent in the metropolis during the present autumn than usual. The deaths last week were only seven (all infants), while the autumnal weekly average is 41. If we except typhus fever, this season is singularly marked by a great diminution of mortality from small-pox, measles, scarlatina, and hooping cough—diseases which are generally so fatal to an infant population.

FEVER IN BERKSHIRE.

Fever of an infectious kind is said to be prevailing to a great extent in the village of Upton. It first manifested itself about a month ago in a cottager's family, and such has been its rapid and extensive diffusion since, that up to Saturday last there were not fewer than 32 deaths out of a village population of 150. The disease, we regret to add, is still raging, and such general alarm has been created, that many of the villagers have begun to change their dwellings to the neighbouring towns, and it is expected, from the removals which are now pretty generally taking place, that the village will shortly become almost deserted. The numbers of persons who have thus been carried off are chiefly of the labouring class. The cause of this calamity is so clearly manifest that the authorities have not deemed it necessary to institute any inquiry; the only mystery is that the contagion should have shown itself in a situation where the climate is considered to be so remarkably healthy. The great mortality from the disease is ascribed to the difficulties in procuring medical attendance at such a desolate place of abode.

REWARDS OF MEDICAL SERVICES BY THE STATE.

Whilst various legal, military, and other appointments requiring abilities of the most ordinary description, have their thousands per annum, with their stars, garters, and coronets in the distance, medical men rarely receive the salaries of common clerks; and medicine is the only profession which has never had a representative in the House of Lords. For these things, however, we care but little, if what rewards are given were given not to patronage, but to science. A petty medical appointment, worth some £40 or £50 per annum, falls vacant by death, and ere the grave has closed over the former occupant, a crowd of candidates are hunting after his post with as eager a cry as if it were a seat on the woolsack. And how is this coveted place to be obtained? Either by the immediate influence of some nobleman at court, or by some political friend who has weight with the Ministry for the time being, and these are to be set to work by the friends of the lucky candidate, without any reference to his real merits or abilities. Again, if the form of an election must be gone through, the candidate who is not a personal friend of the electors must get the electors spoken to by persons who have influence with them; and, after having got up by any means available a long list of testimonials, he must go round cap in hand, at much expense, and always at the loss of much time and temper, humbly to solicit their votes! Now, could any system be devised more repugnant to every feeling of a refined and generous mind, or better calculated to crush the energies of the enthusiastic and retiring man of genius, who, without taste or opportunity for forming influential acquaintances, has come up from the obscurity of the country to push his fortune in a great city, trusting to his abilities and learning alone as his titles to distinction and preferment. — *Dublin Quart. Journ.* Nov. 1846.

ROYAL COLLEGE OF SURGEONS.

Gentlemen admitted Members.

Friday, Nov. 27.—W. Meehan.—J. Newell.—D. Wilson.—M. Ledger.—G. Baddeley.—J. F. Jackson.—H. H. Tribe.—F. Manger.—J. J. Halls.—R. Graveley.—J. G. Mushet.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates.

Thursday, Nov. 26.—Lewis George [illegible], Hesket, New Market, Cumberland.—George William Caines, Uffculme, Devonshire.—Thomas Beswick Purchas, Ross, Herefordshire.—Alfred Brooks, Clifton, Bristol.—Arthur Priest, Waltham Abbey, Essex.—Thomas James [illegible].

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Nov. 21.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	632	Males....	502	Males....	493
Females .	671	Females .	464	Females .	475
	1303		966		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population*, *in* 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	144
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	201
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ... .(Pop. 374,759)	173
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	206
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	242
Total	966

CAUSES OF DEATH.

COL. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	966	1000	968
SPECIFIED CAUSES	965	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	157		
2. Dropsy, Cancer, &c. of uncertain seat	100	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	147	151	157
4. Lungs, and other Organs of Respiration	320	313	294
5. Heart and Blood-vessels	39	29	27
6. Stomach, Liver, and other Organs of Digestion	74	70	72
7. Diseases of the Kidneys, &c...	9	8	7
Childbirth, Diseases of the Uterus, &c.	22	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c............	13	6	6
10. Skin, Cellular Tissue, &c.	1	2	2
11. Old Age......................	55	66	67
12. Violence, Privation, Cold, and Intemperance	28	27	26

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	4	Convulsions	38
Measles	7		
Scarlatina	27	Bronchitis	62
Hooping-cough ..	21	Pneumonia	97
Typhus	58	Phthisis	113
		Dis. of Lungs, &c.	17
Dropsy	15	Teething	8
Sudden deaths ..	4	Dis. Stomach, &c.	6
		Dis. of Liver, &c.	10
Hydrocephalus ..	17		
Apoplexy	34	Childbirth	17
Paralysis	17	Dis. of Uterus, &c.	4

REMARKS.—The total number of deaths was 34 below the autumnal and 2 below the annual average. Typhus fever is still very prevalent and fatal. There has been a great increase, during the week, in deaths from diseases of the lungs, which are much above the averages. The great increase appears to be due to deaths from bronchitis. It is also worthy of note that deaths from childbirth have been lately on the increase. Last week they were more than double the average. In the North and West districts, the mortality was above the average. In the others, it was below.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer		29·67
„ „ Thermometer[a]............		47·8
Self-registering do.[b] ......max.	77·	min. 37·5
„ in the Thames water „	47·2	„ 44·8

[a] From 12 observations daily. [b] Sun.

RAIN, in inches, 0·38: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was about 5° above the mean of the month (42·9°). The extreme hebdomadal range in the self-registering thermometer was 39·5°.

NOTICES TO CORRESPONDENTS.

Dr. Black.—The letter will be inserted next week. The Statistical Table has been received, and we are obliged to our correspondent for it.

A Constant Reader, Croydon.—A communication shall be made on the subject to the writer of the paper.

Mr. Allison wishes us to make a correction in the first paragraph of his letter, p. 953, col. 1, two lines from the bottom, *for* "who have witnessed," *read* "who have not witnessed." Our correspondent is quite correct in his formula, according to the theory which he has adopted; but as this theory is not generally received by chemists, it is perhaps better, in speaking of the medicinal employment of a salt, to adhere to a formula concerning which there can be no misapprehension. For this reason, we have not considered it necessary to publish our correspondent's scientific explanation.

The Lectures of Sir Benjamin Brodie and Dr. Laycock will be inserted in the following number.

We have been compelled to postpone the letter of Medicus and the obituary notice of the late Dr. G. M. Burrows. We have made arrangements for their insertion next week.

The Report of the Microscopical Society, next week.

We shall have great pleasure in giving insertion to Mr. R. H. A. Hunter's Statistical Remarks on the Diseases of the Bombay and Madras Presidencies.

The case forwarded by Dr. Snow will be inserted.

Mr. E. Geoghegan's letter has been received. His communication shall have early insertion.

Mr. Thos. Moore's letter, dated Gwalior, Oct. 6, has reached us. His paper on Hospital Gangrene shall be inserted in an early number.

CORRIGENDUM.—Dr. F. H. Ramsbotham has written to request that a correction should be made in part of the report of the proceedings of the Pathological Society, contained in our last number, p. 946, col. 2. He says, "The sentence to which I refer, as published in the MEDICAL GAZETTE, stands thus: 'Dr. Ramsbotham stated that rupture of the uterus from violence sometimes occurred, but that cases of spontaneous laceration were remarkably rare, few cases having been recorded.' The following, however, is the correct version. In answer to the question by Dr. Bright, who was in the chair, whether these cases of laceration of the peritoneal surface of the womb were common, I remarked 'that Dr. Davis possessed a preparation in which the peritoneum covering the uterus was ruptured near the termination of pregnancy *by external violence*, and I had no doubt that the same had occurred on other occasions; but that it was exceedingly rare for the peritoneum to become lacerated *during the action of the uterus in labour*, while the parenchyma was but slightly torn; so uncommon, indeed, that, as far as I knew, there were not more than six or seven cases put on record.'"

Stewart. Dublin: Fannin and Co.

Just published, 8vo. cloth, 1

ON the PLAGUE; more
on the Police Management of
with Hints on Quarantine. By A.
Deputy Inspector-General of Milit

London: John Churchill, Princes

Just published, 8vo. 15s.

DR. UNDERWOOD'S T
on the DISEASES of CHIL
Directions for the Management of
Tenth Edition, revised, with the ad
new matter. By HENRY DAVIES
of the Royal College of Physiciar
Physician to the British Lying-in

London: John Churchill; Lon
Simpkin and Co.; S. Highley;
Dublin: Hodges and Smith.

Just published, post 8vo. 7

PRACTICAL REM
NEAR SIGHT, AGED
IMPAIRED VISION. By W. W
F.R.C.S. Senior Surgeon to the
Ophthalmic Institution.

London: John Churchill, Princ

In 8vo. cloth, price 6

A PRACTICAL TREAT
FLAMMATION, ULCERAT
DURATION of the NECK of the U
Remarks on Leucorrhœa and Pro
symptoms of this form of Disease.
BENNET, M.D., Physician-Acco
Western Dispensary, formerly H
to the Hospitals St.-Louis, La Piti
pétrière, Paris, &c.

"Dr. Henry Bennet's work has,
ably supplied a deficiency in this p
...... We do not hesitate to say t

N° 993.—Vol. XXXVIII.
[New Series, No. 85.]

Price {Unstamped, 8d. Stamped.... 9d.

LONDON MEDICAL GAZETTE

OR

Journal of Practical Medicine.

Published every Friday Morning.

December 11, 1846.

Also in Monthly Parts.

LECTURES. Page

Lectures on Distortion of the Spine not connected with Caries, delivered in the Theatre of St. George's Hospital, by Sir B. C. Brodie, Bart. F.R.S.: Lecture I.. 999

ORIGINAL COMMUNICATIONS.

Case of Dislocation of the Hip-joint complicated with Fracture of the Femur, but at first treated as the latter. By W. H. Bainbrigge, Surgeon to the Northern Hospital, Liverpool.................... 1004

Observations on Phagedenic Sphacelus, or Hospital Gangrene, which attacked the Cellular, Muscular, and Fibrinous Tissues of the Wounds of the Privates and Non-commissioned Officers of Her Majesty's 29th Regiment of Foot, after the Actions of Ferozeshah (21st and 22d Dec. 1845) and Sobraon (10th Feb. 1846). By Thomas Moore, B.A. M.B. Surgeon in Medical Charge 5th Infantry Regiment, Scindia's Contingent, Gwalior; formerly Secretary to the Medico-Chirurgical Society of Dublin 1005

On the Nature and Principles of Treatment of Inflammation, and the allied Disorders of the Circulation. By George Robinson, M.D. Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-upon-Tyne Medical School. Part VII.............................. 1008

LEADING ARTICLES.

On the Mode of Electing Coroners 1015

REVIEWS.

Animal Chemistry; or, Chemistry in its applications to Physiology and Pathology. By Baron Liebig, Professor of Chemistry in the University of Giessen. Edited by W. Gregory, M.D. F.R.S.E. Professor of Chemistry in the University of Edinburgh, &c. Parts 1 and 2 1018

Principles of Human Physiology: with their chief Applications to Pathology, Hygiène, and Forensic Medicine. By W. B. Carpenter, M.D. F.R.S. 3d Edition. .. 1024

The Scientific Phenomena of Domestic Life familiarly explained. By C. F. Gower. 2d Edition 1026

A few Notes on Cruelty to Animals; on the Inadequacy of Penal Law; on Hospitals for Animals, &c. &c. By R. Fletcher, Consulting Surgeon to the Gloucester General Hospital, &c.................. 1024

MEDICAL TRIALS AND INQUESTS.

Trial for Murder by Poisoning with Arsenic —Evidence from Symptoms, Post-mortem Appearances, and Chemical Analysis— Failure of direct Proof of Administration —Acquittal of the Prisoner 1027

PROCEEDINGS OF SOCIETIES.

Microscopical Society.—Mr. Anthony on a Method of rendering the Appearances in delicate Structures visible by means of oblique transmitted Light.............. 1032

Mr. Quekett's additional Observations on the Intimate Structure of Bone 1032

CORRESPONDENCE.

On the Influence of Sex and local Position on Insanity 1033

On the Local Treatment of Strangulated Hernia................................ 1034

Vital Statistics of Manchester. By James Black, Esq. 1035

Remarks on Two of the Clauses (175 and 176) of the Health of Towns Bill, and on the Mode in which they are likely to affect the Interests of the Medical Profession 1036

Registration of Deaths 1037

MEDICAL INTELLIGENCE.

Radcliffe Infirmary.—Election of Surgeon .. 1003

Explosive Properties of Gun-Cotton........ 1037

Chemical Equivalents of Organic Substances 1038

Expenses of a Medical Education in Spain.. 1038

University of London.—List of Candidates who passed the Examination for Honours 1038

Memoir of George Mann Burrows, M.D. F.L.S. Fellow of the Royal College of Physicians, London.................... 1038

SELECTIONS FROM JOURNALS, ETC.

On Iritis in Infancy. By J. Walker, Esq. Surgeon to the Manchester Eye Hospital 1014

Constitutional Syphilis in the Father producing Syphilis in the Offspring, the Mother remaining to all appearance healthy 1041

Condition of the Blood after Death by Strangulation 1042

WEEKLY TABLES, ETC.

[*For* Advertisements, *see next page.*

THE NATIONAL INSTITUTE

OF

Medicine, Surgery, and Midwifery.

PRESIDENT.

R. R. PENNINGTON, Esq.

VICE-PRESIDENTS.

JOHN NUSSEY, Esq.
THOMAS MARTIN, Esq. (Reigate).
NATHANIEL CLIFTON, Esq.

COUNCIL.

Metropolitan.

Ancell, Henry, Esq.
Bird, James, Esq.
Bowling, John, Esq.
Clayton, James, Esq.
Clifton, Nathaniel, Esq.
Cooke, William, Esq.
Dale, George Thomas, Esq.
Davis, Thomas, Esq.
Dodd, John, Esq.
Fuller, H. P., Esq.
Hardwick, Alfred, Esq.
Headland, Edward, Esq.
Lavies, John, Esq.
Merriman, J., Esq.
Moore, Edward Duke, Esq.
Nussey, John, Esq.
Propert, John, Esq.
Randall, Alfred M., Esq.
Smith, John Sim, Esq.
Squibb, George James, Esq.
Sutton, John, Esq.
Tegart, Edward, Esq.
Webster, George, Esq.

Provincial.

Allison, William, Esq., East Retford.
Barker, T. Herbert, Esq., Bedford.
Bedingfield, James, Esq., Stowmarket.
Bryan, J. M., Esq., Northampton.
Burnett, Charles M., Esq., Alton, Herts.
Colthurst, John, Esq., Clifton.
Coward, William, Esq., South Shields.
Dalrymple, Donald, Esq., Norwich.
Dickinson, W. F. D., Esq., Ulverstone.
Hughes, Richard, Esq., Stafford.
Hunt, R. T., Esq., Ridgefield, Manchester.
Hurst, Isaac, Esq., Bedford.
Keele, John Rushforth, Esq., Southampton.
Lowe, Richard, Esq., Bristol.
Martin, Thomas, Esq., Reigate.
Morley, Henry, Esq., Medhurst.
Paget, Thomas, Esq., Leicester.
Rogerson, George, Esq., Liverpool.
Seabrook, Brewster T., Esq., Brighton.
Scale, George J., Esq., Landport, Portsea.
Stedman, James, Esq., Guildford.
Sleight, Robert P. Esq., Hull.
Thompson, Joseph, Esq., Nottingham.
Warner, Thomas, Esq., Cirencester.

TRUSTEES.

Thomas Davis, Esq.
James Clayton, Esq.

TREASURERS.

John Dodd, Esq.
Edward Tegart, Esq.

The National Institute of Medicine, Surgery, and Midwifery, consists at present of 1260 Members, and the Subscription is One Guinea per Annum.

OBJECTS OF THE INSTITUTE.

The principal objects of the Institute are,—to maintain an effective organization of the GENERAL PRACTITIONERS;—to expose, discourage, and suppress, by Registration, and every other practicable means, illegal and unqualified practice;—to employ all legitimate means for the purpose of urging upon the Government and the Legislature, the claims of the General Practitioners of this Country to Corporate rights;—to promote a high standard of Education and Qualification, with a satisfactory test by efficient examination, for every individual authorised by Law to practise Medicine, Surgery, and Midwifery;—and to form, irrespective of the SPECIAL COLLEGES, an Institution comprising within itself the entire range of Medical and Surgical knowledge.

By the constitution of the Institute, ONE-THIRD of the Council will go out of office in August 1847.

The following Volumes of Books have been already received by the Council towards the formation of a Library:—

50 vols.	presented by G. J. Squibb, Esq.
5 vols.	presented by Henry Bateson, Esq.
1 vol.	Albinus's Edition of Cowper's Anatomy (folio, 120 Plates), by Henry Ancell, Esq.
1 vol.	Report on the Gardner Peerage Case, by James Bird, Esq.
1 vol.	Collectanea Medico-Chirurgica, by the Author, William Maclure, Esq.

Donations of Books, and of Anatomical and Pathological Preparations, are received by the Trustees, James Clayton, Esq. and Thomas Davis, Esq. at the Offices of the Institute.

Members of the Profession can obtain information, and enrol themselves as Members of the Institute, on application at the office, 294, Regent Street.

It is requested that Post-Office Orders be made payable at the Branch Post-Office, Old Cavendish Street, to one of the Treasurers, JOHN DODD, Esq. Portman Street, Portman Square; or EDWARD TEGART, Esq. Pall-Mall; and that the gentleman, who is to receive the amount, be mentioned in the letter of advice.

By order of the Council,
GEORGE ROSS, Secretary.

Office, 294, Regent Street,
Dec. 8th, 1846.

Lectures.

LECTURES ON DISTORTION OF THE SPINE NOT CONNECTED WITH CARIES,

Delivered in the Theatre of St. George's Hospital,

By Sir B. C. Brodie, Bart. F.R.S.

Lecture I.—Nov. 25, 1846.

Although I have vacated the office, which I held during a large portion of my life, of surgeon to St. George's Hospital, I have not forgotten the many obligations which I owe to this institution. It was within these walls that I learned the principles of the art which I undertake to practise; and it is to the experience which I have here acquired at the bedsides of the patients, and in the post-mortem examinations, that I am indebted for the best part of whatever professional knowledge I possess. The conversations of my colleagues, the inquiries and observations of my pupils, and my friendly intercourse with both, have been alike to me sources of instruction. Some of the happiest moments of my life have been among those which I have devoted to the performance of my duties here; and, of the intimacies and friendships, which it has been my lot to form since my first entrance into this busy world, none have been to me more gratifying or more durable than those which have arisen out of my connexion with this hospital. It was under the influence of these sentiments that, on resigning my official situation, I offered to give annually a brief course of lectures in this theatre; and it is in compliance with the wishes of my former colleagues that I still continue to address you. I am sensible that their kindness has led them to over-estimate the value of these discourses; but whatever that may really be, you may be assured that I feel an earnest desire to give you useful knowledge; and that, bearing in mind the doubts and difficulties which I had myself to encounter in the early part of my professional career, I shall feel myself well rewarded for my labours if I can enable you to solve some of those doubts, and overcome some of those difficulties, by which you yourselves may hereafter be harassed and perplexed.

And here let me say a few words as to the plan which I have generally adopted, and which it is still my intention to pursue, in the delivery of these lectures. I presume that every one present *has for his principal object to render himself* an efficient practical surgeon, so that he may be as well qualified as possible to meet the demands for surgical assistance which the public will make upon him. Some few among you, whose education is protracted beyond the ordinary period, may have other aspirations also; but on this one point you are all agreed; and it is this that I shall endeavour to keep in view in the instructions which I propose to give you. If there be any among you who expect that they will obtain from me even an abridged history of all that has been said or done in relation to the particular matters which I may bring before you,—that I shall offer to you criticisms on the opinions of others as to the history and treatment of disease, discussing their different views in pathology and different modes of practice,—such persons will be disappointed. I hold now, as I always have held, that these things may be better learned from books than from any oral communication; and although I do not say that I may never incidentally allude to them, they will not form the real subject of my lectures. My object is to give you especially the results of my own individual observations and experience. I shall endeavour to put myself into your place, considering what it is that will be most important for you to know when you are first engaged in professional practice, and, as far as it is in my power to do so, supplying the information of which you will stand in need. Of course, it is only up to a certain point that you can be thus assisted. Nothing that you can learn from lectures will supersede the necessity of observing and thinking for yourselves. In the first instance, it is true that you must rely, to a great extent at least, on the experience and suggestions of others; but, as you advance in life, you will find that the best part of a man's knowledge is that which he obtains for himself. Of this he knows the real value: it is always at hand,—always ready for use: it is the only thing that will inspire you with a just confidence in yourselves, or impress a like confidence on others.

The subject which I have selected for this and the following lectures, is that of *Distortions of the spine, independent of caries or ulceration.* Many circumstances make these cases especially worthy your attention. Among the more affluent classes of society, they are, for the most part, the occasion of great anxiety. The condition of the patient through life depends on the treatment which is had recourse to, and the attention that is paid, when, at an early age, the first indications of a deviation from the natural figure are perceptible. Then, in private practice, cases of this description are of so frequent occurrence, that a surgeon who is much employed is consulted about them almost daily. There is still another circumstance which induces me to bring the subject under your consideration. You will learn little or nothing of these diseases in the hospital. Distortions of the spine, except when of a very inveterate character, are little regarded by the labouring classes of society: they involve no question of life and death, and, indeed, in most instances, do not even affect the general health of the patient. Whatever be the treatment which is required, it must be persevered in, not for weeks, but always for months, and more frequently for many successive years; and for these various reasons patients who are thus afflicted are rarely met with in the wards of an hospital. When I first became engaged in a considerable private practice, and cases of curvature of the spine were presented to my observation, I was in doubt as to their nature and treatment. I knew nothing of them from my own experience, and I had learned nothing of them from my teachers. I felt that in this respect my education had been imperfect, and it took me no small trouble to supply the deficiency. Your situation in this respect is probably not very different from what mine was formerly; and, such being the case, I have reason to believe that these lectures may not be unacceptable to you.

In making these observations, however, let me not be misunderstood as claiming for myself any peculiar knowledge respecting the pathology and treatment of cases of distortion of the spine beyond that which other surgeons possess who have been much engaged in their profession: I merely wish you to understand that the hospital will not afford you the information which you stand in need of. You must seek it hereafter in private practice; and, in the meantime, the instructions of others as well as myself will answer this good purpose, that they will give your minds a right direction, and enable you the better to avail yourselves of your future opportunities. Surgical literature will assist you to a certain extent. Much, however, of what has been published, especially in former times, is, as I apprehend, founded on an erroneous view of the subject. It was in the Treatise on the Nature and Treatment of Spinal Distortions, by Mr. Tilleard Ward, and more fully afterwards in a work on the same subject by the late Mr. Shaw, that the true principles on which the treatment of the great majority of cases of lateral curvature of the spine should be conducted, were first enunciated; and now, at the present time, I am not aware that, among the numerous works on the subject which have issued from the press, there is any one that you may consult with so much advantage as those which I have just mentioned.

In a person of what is called a good figure, when the feet rest on the ground with the heels in contact, the lower limbs being straight, and the upper limbs occupying the same position on the sides, the spine rises perpendicularly in the same line with the *os sacrum*, and making on each side the same angle with the pelvis; the centre of gravity being somewhere in the middle line of the body. Whatever causes the centre of gravity to shift its place so as to be on one side of the central line, will necessarily cause some alteration in the position of the spine. A heavy weight in one pocket, or held in one hand, where there is none in the other; the greater height of the heel of one shoe, or an unequal leaning on the two lower limbs: even such trivial matters as these will occasion more or less of lateral deviation of the spine. If from any cause whatever the centre of gravity be moved far away from the spine, the individual would necessarily fall to the ground if he were not to make an effort to prevent it. The result of that effort is, that, while the cause first in operation, whatever that may be, produces a bending to one side in one part of the spine, by the action of the muscles another part of the spine is bent in the opposite direction: and thus, in all cases in which a lateral curvature exists, the curvature is double, the whole spine assuming a form which is usually, and not very inaptly, compared to that of the italic *S*. The degree of such curvature of course varies in different cases. In many persons it is so trifling as to be scarcely perceptible, in others it is so considerable as to become a great and obvious deformity.

From whatever cause the spine becomes affected with a lateral curvature, it cannot but happen that the effects of it should extend to other parts of the trunk. The ribs corresponding to the convex side of the curvature are at their anterior extremities separated from each other by a wider interval than is natural, while on the opposite side they are, as it were, squeezed together, and compressed into a smaller compass. The *os ilium* of one side appear to be more prominent than that of the other; and there is a corresponding change in the appearance of the scapula, and clavicles, and even of the sternum. I notice these changes only briefly at present; I shall explain them more particularly hereafter.

No part of the body can be permanently displaced without undergoing an alteration in its figure. In a case of unreduced dislocation of the humerus, the old glenoid cavity is absorbed, and a new articulating surface is generated on the lower margin of the scapula, while the head of the humerus becomes reduced in size, and otherwise altered so as to correspond to the parts with which it is now in apposition. In like manner, in an established case of lateral curvature of the spine, the bodies of the vertebræ are found reduced in thickness on one side, increased in thickness on the other; the ribs bulge unnaturally in one place, and are unnaturally depressed in another: and corresponding changes take place in the clavicles and sternum, and even in the scapulæ. These changes are produced the more readily, because when lateral curvature exists it almost invariably begins to shew itself in early life, while the process of growth is going on. These facts should be borne in mind, with a reference to practice. As deviations from the natural figure occur with more facility during the period of growth, so is the restoration of the natural figure more easily obtained during the same period also. The treatment of the disease cannot be begun too soon after the first signs of spinal curvature are perceptible, and little or no benefit can arise from the continuance of the treatment after the period of growth is completed.

Having made these preliminary observations, I am better enabled to explain to you the various circumstances in which lateral curvature of the spine may have its origin.

If one lower limb be shorter than the other, the ilium on that side (both feet being planted equally on the ground) must necessarily be depressed, and a double curvature of the spine is the consequence, produced in the manner which I have already mentioned; that is, one by the altered position of the pelvis, the other by the muscular effort which the patient makes to keep the centre of gravity in its proper place.

A difference in the length of the two limbs is in some instances the result of original formation. I have had young persons brought to me because one shoulder was observed to be higher than the other (this being usually the first thing observed in the commencement of a lateral curvature of a spine), and in whom I have found the *femur and tibia* on one side respectively shorter than the *femur and tibia* of the other, although there neither were at the time, nor had been previously, any indications of disease in either limb. At other times, however, the difference in the length of the femur or tibia is clearly to be traced to disease. A diseased bone may grow less rapidly than the corresponding bone which remains in a healthy state. Thus, in a case of scrofulous affection of the bones of one finger, it is very common for the finger thus affected not to grow at all, while the other fingers grow as usual. The reverse of this also may happen, and the diseased bone in certain cases becomes actually longer than its fellow of the opposite side. So it was in two cases of necrosis of the femur, of which I have preserved notes, and which had in consequence been mistaken for cases of disease of the hip-joint. Now, in such cases as these which I have just described, it must be evident to you that the only thing to be done is to endeavour to equalise the length of the limbs by making the sole of one shoe thicker than that of the other. Nothing done to the spine itself can be of the smallest service. Indeed, for the most part, in these cases, the curvature of the spine is trifling. The addition of a very little cork to the sole of one shoe will be sufficient to prevent its being observed at all: and a clever shoemaker will easily manage so that the difference of the two shoes will be imperceptible also.

Those last observations will apply equally to another class of cases, in which, after fracture of the femur, or even of the tibia, the limb is shortened, and curvature of the spine is the consequence. Nothing done to the limb can restore its proper length, and nothing done to the spine itself can restore its proper figure. A thick sole to the shoe is the only remedy.

In a young person who has recovered from disease of the hip-joint after the formation of abscess, (and in some cases even where suppuration has not taken place), the limb on the side of the disease is left considerably shortened. The shortening of the limb is sometimes the consequence of actual dislocation; at other times it arises from the margin of the acetabulum having been destroyed by ulceration, or from a partial destruction of the head of the femur, the limb being aftewards drawn upward by the action of the glutæi muscles. In whatever way the shortening of the limb is produced it necessarily happens that as soon as the patient begins to walk the spine becomes distorted. There is, however, in many of these cases, another cause operating so as to produce the same result. The patient has been lying for a long time in bed without any particular attention being paid to the position in which he has placed himself, and this position has probably been that of lying on one side with the spine twisted laterally. The lateral curvature thus produced of course continues to exist when the patient first begins to stand and walk. Now of these two kinds of curvature the first is evidently irremediable; but the latter admits of considerable, and perhaps of complete, relief, under a simple mode of treatment, which I shall explain to you hereafter.

There is a peculiar paralytic affection to which children are liable, and which I have in my lectures been accustomed to describe under the name of *infantile paralysis*. The child (generally after suffering from an attack of fever), exhibits symptoms of what is commonly called "determination of blood to the brain," and not improbably has an attack of convulsions. Then, all at once the muscles of some part of the body lose their power of acting under the influence of the will. In a few cases, recourse being immediately had to the exhibition of mercury, the paralysis is relieved. In the majority of cases it is not relieved at all, but remains unaltered through the rest of the patient's life. Now, if this has happened in one of the lower limbs, you need only refer to the observations which I made in the beginning of the lecture to be satisfied that a lateral curvature of the spine must be the consequence. One lower limb will support the weight of the body, the other will not support it: one limb is heavier than the other, and one limb only is exercised. The pelvis under these circumstances must become depressed on one side more than on the other, and a lateral inclination of the spine will follow depression of the pelvis. In some instances all the muscles of the leg and thigh are paralytic, and the whole of the lower limb is useless to the patient. In other cases perhaps not more than one or two muscles are thus affected, and the curvature of the spine varies accordingly.

In a very few of such cases, where the paralysis is of limited extent, the application of an instrument which in some degree supplies the place of the muscles whose power is deficient may be useful in assisting the patient to retain the erect posture. In other cases, where, in consequence of the want of power in the antagonist muscles those of the calf of the leg are contracted, the heel being elevated so that it cannot be brought into contact with the ground, some good may be done by the subcutaneous division of the *tendo Achillis*. But the advantage obtained in either of these ways is of limited extent, and beyond what I have just mentioned nothing is to be expected from the exercise of our art.

The effect of paralysis on the figure of the spine is not confined to those cases in which the seat of the paralysis is in the lower limbs. Even a *partial* loss of power in the muscles of one of the upper limbs will, in a growing person, become a cause of spinal curvature, and in one case which fell under my observation, in which there had been, from infancy, a complete paralysis of *all* the muscles of the arm, forearm, and hand, the spine was as much distorted as it would have been in a case of recovery from diseased hip-joint with a very contracted limb. The distortion here is to be attributed to the difference in the weight of the two limbs, and the greater muscular action on the side opposite to that of the disease, combining to draw the centre of gravity out of the middle line of the body. Of course the case is beyond the reach of remedies. Nothing can restore the spine to its proper condition but the removal of the paralysis, a thing rarely to be accomplished, even when you are consulted in the first instance, and of which there certainly can be no reasonable expectation at that later period when the attention of the parents is first called to the alteration of the patient's figure.

Another cause of lateral curvature of the spine is a difference in the capacity of the two sides of the chest. Hypertrophy of the heart, or a diminution in the size of one lung, will produce the same effect. I was consulted concerning a little girl in whom there was an unusual degree of this kind of distortion. On examination I found that she breathed with one lung only, and that the other side of the chest was reduced to a very small size, the ribs lying almost in contact with each other. The fact proved to be, that, two or three years before the period of my being consulted, she had suffered from a severe attack of pneumonia, in consequence of which the organization of one lung had been completely destroyed, so as to render it altogether useless, respiration being performed wholly by the other. Some mechanical apparatus had been recommended in this case with a view to relieve the spinal curvature; but I need scarcely explain to you why neither this nor any other kind of treatment can, under such circumstances, be of the smallest service.

It was the prevailing opinion formerly, and I believe that some hold the opinion still, that the common cause of a lateral curvature of the spine is a rickety condition of the bones. This view of the pathology of the disease is, however, not confirmed by the specimens preserved in museums of morbid anatomy, and no one who has seen much of these cases in the living person can doubt that the fact is otherwise. The altered shape of rickety bones, in which there is, as you well know, a deficiency of hard earthy matter (phosphate of lime) depends partly on the action of the muscles, but still more on the operation of the superincumbent weight. The greater the weight the greater is the distortion. Hence in a rickety child the disease is manifested first in the legs, then in the thighs, then in the pelvis, and afterwards in the spine. Now, in cases of lateral curvature of the spine, it rarely happens that there is anything like the rickety flexure of the lower limbs. In the rickety pelvis the two *ossa pubis* are as it were squeezed towards each other both behind and below the symphysis. The form of the brim of the pelvis is altered, the diameter of it being diminished in the direction from before backwards, and increased from side to side. One result of such distortion of the pelvis is, that parturition, at the full period of utero-gestation, is rendered either difficult or impossible. Nevertheless we meet with instances without number of women with very considerable lateral curvature of the spine who have borne children with as little inconvenience as others whose spines were straight.

We are not, therefore, justified in regarding rickets as the common, or even as a frequent cause of spinal curvature: nevertheless, it is the cause of it in a few instances. The curvature in these cases is, for the most part, not merely lateral, but there is a bending of the lower part of the spine forward, so that the spinous processes project posteriorly in the form of a segment of a circle. This circumstance, and the condition of the legs and thighs, afford sufficient grounds for our diagnosis.

What is to be said as to the treatment of this variety of distorted spine may be comprised in a few words, and will be more conveniently introduced here than in any other place. I know of no reason why the treatment of the rickety affection of the spine should be different from that of the rickety affection of the legs and thighs. Of this last I see a great number of cases. In a large proportion of them, heavy instruments of steel have been already applied, with a view to reduce the curvature. In others the same thing has been recommended either by instrument-makers or surgeons, but the machinery has not yet been applied. Now what is the effect of this mode of treatment? The original curvature is probably removed, but in order that this object should be attained, the instrument must make pressure on at least two points, one in the limb above, and the other in the limb below, and at each of these points a curvature is produced which did not exist before, so that there is simply an exchange of one curvature for two others. Then the instruments are a great weight and encumbrance to the child. He cannot drag them about so as to take such an amount of exercise as is necessary for the maintenance of the general health. They harass and torment him; and as they are always liable to break, and be otherwise out of repair, they are an endless trouble and expence to the parents. There is only one form of the disease in which, according to my experience, the use of instruments is at all justifiable, and that is one of very rare occurrence, in which the flexure is confined to the superior epiphysis of the tibia, the tibia below the epiphysis being bent outwards, making an angle more or less obtuse with the femur, so that the sole of the foot is with difficulty placed on the ground. With this single exception, I have never seen a single case of rickety curvature of the lower limbs, in which, if the health could be improved, and the general vigour of the system maintained, the curvature did not disappear spontaneously without any kind of local treatment being had recourse to; while, on the other hand, under a continuance of bad health, every kind of local treatment has been ineffectual. I generally recommend that the child should live in the country rather than in a crowded city; that he should be as much as possible at the seaside; that he should take some preparation of iron from time to time, the bowels being at the same time carefully regulated; that he should use a shower-bath every morning, cold in summer, with the chill taken off in winter; and that he should live on a plain but nutritious diet. In the early part of my practice I advised that he should be encouraged to crawl on the floor rather than to use his feet, and that instead of running about out of doors he should be taken into the fresh air in an open carriage. I am now convinced that this advice was wrong; that the general health cannot be maintained without exercise; that the more the limbs are used the better chance is there of the necessary quantity of phosphate of lime being deposited in the bones; and that as the bones become harder so will they most certainly regain their proper figure, in spite of the weight which they have to sustain. Even in what might be termed a bad case of rickety affection of the limbs, three or four years, and in slighter cases a still shorter period, will generally be sufficient for this beneficial change to be brought about. From what I have already said, you may be aware that I have a more limited experience of rickety disease as it exists in the spine than as it exists in the extremities; but nevertheless I have seen enough of it to be satisfied that the plan of treatment which is the best adapted in the one case is also the best adapted to the other.

ELECTION OF SURGEON TO THE RADCLIFFE INFIRMARY.

The election of a Surgeon to the Radcliffe Infirmary, vacant by the death of T. R. Fisher, Esq., took place on Friday, Dec. 4, at that establishment. The candidates were W. P. Ormerod, Esq., and J. Torry Hester, Esq., late of Abingdon. Mr. Ormerod was nominated by the Rev. Dr. Harington, Principal of Brazenose College, and seconded by Thomas Robinson, Esq., of the Old Bank. Mr. Hester was put in nomination by the Rev. Mr. Dodson, of Abingdon, and seconded by J. S. Bowles, Esq., of Milton Hill. At the close of the poll, the numbers were—for Mr. Ormerod, 139; for Mr. Hester, 86. Mr. Ormerod was therefore declared duly elected.

Original Communications.

CASE OF
DISLOCATION OF THE HIP-JOINT,
COMPLICATED WITH FRACTURE OF THE FEMUR, BUT AT FIRST TREATED SIMPLY AS THE LATTER.

By W. H. Bainbrigge, Esq., F.R.C.S.
Surgeon to the Northern Hospital, Liverpool—1846.*

Mrs. ———, æt. 38, a married lady, of a highly scrofulous habit, had a scirrhous tumor of the breast, for which she underwent an operation, which left her in a state of cachexia so extreme that she was for two years confined to her room, and totally unable to move about. She was reduced to such a state of emaciation as to appear a mere living skeleton. At the expiration of this time her health began slightly to improve, and she was able, by the aid of a crutch and stick, to take a little exercise in her room; but on one occasion, in attempting to walk round the room, the following accident happened:—With one hand resting on the table, which served as a support to the left side, and the other arm assisted by a stick, she tried to walk round the table, when, suddenly losing her balance, the weight of the trunk was momentarily thrown on the left leg, round which, as on an axis, the body performed a semi-revolution, and fell with force on the floor. Medical aid was immediately summoned, and the femur, on examination, was pronounced to be fractured near its upper third. The fractured limb was found to be from an inch and a half to two inches shorter than the other. Without entering into details, it will suffice here to state that her medical attendants, by forcible extension, brought the injured limb to match the sound one in length, and kept it in that state by means of the long straight splint. In this position she remained for full five months, suffering, as she informed me, the most excruciating pain, and without any progress being made towards the re-union of the fracture.

When called in, I found her in the above deplorable state, and observing, from the great pain she endured, that she could not then bear the slightest movement of the limb, I merely removed the roller, and felt for the fracture on the inner side of the thigh, when I discovered, to my surprise, that the ends of the fractured bone were fully three inches apart. It struck me that the best—indeed the only—thing I could do was to remove the extension and suffer the muscles to resume their normal condition. This being done, the patient experienced immediate relief. I was not at this time aware of any lesion beyond the fracture, though I suspected, from the space I had discovered between the ends of the bones, that there must have been also dislocation of the hip-joint. This done, I left her for the present.

A day or two after the pain had so far diminished that I was enabled to make a full examination, and, turning the patient slightly on her right side, I immediately detected a dislocation of the hip-joint of the fractured limb on the dorsum ilii. I found also that a large deposit of *callus*, about the size of the fist, had been thrown out opposite the fracture, and attached to the upper portion of the bone at its fractured end; and now the case in all its bearings stood clearly revealed before me.

Forcible extension had been established and persevered in for five months, under the impression entertained in the first instance by her medical attendants that it was simply a case of fracture, and that the shortening of the limb arose from muscular contraction. This *forcible extension*, instead of approximating the ends of the fractured bone, only dragged them farther apart, and their distance, which at first was from one and a half to two inches, now became doubled. The unnatural and long-continued extension of the muscular fibre had produced the intense suffering under which the patient laboured. The callus, or, as the patient termed it, the excrescence, was regarded as a cancerous tumor, and the cause of the intense pain,—a supposition apparently favoured by the fact of her having had a scirrhous tumor of the mamma two years before, and her scrofulous habit of body. The non-union of the fracture had also been ascribed to the same causes. The real nature of the accident had been wholly mistaken.

---

* Communicated by the author.

What now remained to be done? After the lapse of five months, it was out of the question to think of reducing the dislocation. To promote the union of the ends of the fractured bone became therefore the great point to be aimed at. No difficulty was experienced in accomplishing it. The removal of the long splint enabled the contraction of the muscles to bring the ends of the bones into apposition. I now applied a short splint to the inner part of the thigh, and left the limb quiescent on pillows. No splint could be placed on the outer side, in consequence of the callus, which, however, soon became absorbed. This, together with the requisite treatment for the improvement of her general health, was the course pursued, and I had the satisfaction of finding the fracture re-united in about six weeks. At the end of two months the patient was quite restored, with the exception of the deformity of the limb resulting from the dislocation of the hip-joint, which had formed for itself new relations.

The details of the above case impress upon us the paramount importance of careful, patient, and deliberate examination, *in the first instance.* One error at the commencement may not only prove mischievous and embarrassing *per se*, but lead to others equally if not more so. When once a fixed principle is laid down, such is the blinding effect of a first-formed decision, that although results may develope themselves in the sequel so marked and plain as to expose the original error to any unbiassed judgment, yet it is still persevered in, and leads to many more. An iron formula of procedure is established, and every new fact is screwed into adaptation with it.

Here we observe nature's extraordinary attempt to bridge the chasm which had been widened by the process of extension of the limb,—stigmatised as an aberration, her friendly indications unheeded and misunderstood, and her *crowning efforts* baffled by the injudicious interference of art, resulting from an erroneous estimate in the first instance of the real nature of the case. It is with a view to guard against the repetition of such errors that I have thought it my duty to give the details of the above case to the profession.

OBSERVATIONS ON

PHAGEDENIC SPHACELUS, OR HOSPITAL GANGRENE,

WHICH ATTACKED THE CELLULAR, MUSCULAR, AND FIBRINOUS TISSUES OF THE WOUNDS OF THE PRIVATES AND NON-COMMISSIONED OFFICERS OF HER MAJESTY'S 29TH REGIMENT OF FOOT, AFTER THE ACTIONS OF FEROZESHAH, 21ST AND 22D DECEMBER, 1845, AND SOBRAON, 10TH FEBRUARY, 1846.

By Thomas Moore, B.A. M.B.

Surgeon in Medical Charge, 5th Infantry Regiment, Scindia's Contingent, Gwalior; formerly Secretary to the Medico-Chirurgical Society of Dublin.

When Her Majesty's 29th Regiment of Foot was ordered to march from Hurreeke Ghat to Loodheanah, to strengthen the force under Major General Sir Harry Smith, G.C.B., previous to the action of Aliwal, I was directed to proceed from the Commander-in-Chief's camp to Ferozepore, to take charge of the Depôt hospital of the regiment.

In the wards of the hospital, gangrene was rapidly spreading amongst the men. In tents pitched at a distance from the hospital, there were sixteen or seventeen cases already affected by this disease, some of 10 days, some of 12 days, and a few of 15 days' duration. With one two exceptions, these cases were in the advanced stage of the disease.

In those cases attacked by gangrene subsequent to my assuming the medical charge of the wounded, the symptoms and local indications of the incipient stages of the disease were almost invariably ushered in by a considerable amount of constitutional irritation—by shiverings, slight at first, but gradually increasing in strength and duration; severe and constant pains in the head, not confined to the forehead or temples, but extending backwards to the sinciput; the face became flushed; the eyes bloodshot, with a feeling of heat and pain in the centre of the eyeballs; the skin burning hot; the pulse accelerated, ranging between 116 and 120; the perspiration checked; the tongue loaded with a foul clammy fur; thirst urgent; the bowels constipated; the secretion of urine scanty and high-coloured. A feverish restlessness at night rendered the patient restless, wakeful, and anxious.

The wounds of ingress and egress, of entrance and exit, produced by grape-shot or musket-ball, although differing in shape and the appearance of their edges, were indiscriminately attacked by this disease. Coetaneous with the onset of the symptoms enumerated, the wound which looked healthy, and was progressing favourably, at once exhibited an alteration in its appearance.

The healthy purulent discharge which had been secreted hitherto in abundance from the surface and bottom of the wound, was diminished in quantity, and changed in colour and consistence, or was entirely arrested. The granulations, healthy in appearance at the previous dressing, and sprouting up from the bottom and sides of the wound, looked irritable, dry, and glossy. In some wounds they appeared tense, distended with a semi-transparent, gelatinous fluid; whilst in a third class they presented a flaccid, flabby exterior, a dark red colour, bordering on purple, and were agglutinated together by a thick, pasty, morbid secretion of sanguineous and purulent matter. The edges of the wound looked red, inflamed, and tumid; the newly-formed cuticle appeared detached from the granulating surface, and became everted, glossy, pouting from serous infiltration, painful, and very irritable, discharging, in common with the unhealed surface, a thin sanguineous fluid. The skin encircling the wound, and for a short distance external to it, exhibited different shades of red: in immediate contact with the edges of the wound the colour was deep red, and frequently purple: the former depth of redness formed a broad circular band, beyond which it gradually faded into a bright scarlet or pinkish colour, whilst the latter dark violet or purplish colour was limited to a few narrow streaks, or a few scattered circular dots. In a few cases the first local indication of the wound having been attacked by this disease consisted in the formation of a small granular eruption, sometimes in the clustering together of minute vesicular bodies, distended with a serous fluid on the edges of the wound, but unencircled by inflammatory redness during the first twelve or fifteen hours of their formation.

From the commencement of the attack, an extreme degree of irritability and painfulness has existed, not only in the surface of the wound, but also throughout the entire transit of the ball, and at a distance from the seat of the injury. The acute pricking lancinating pains, with a feeling of tension of the limb and burning heat or scalding sensation in the part, have not been confined to the immediate seat of the wound, but have extended to more remote parts. If the grape-shot or gun-shot wound were situated on the hand or fore-arm, the shooting pains have extended up the arm, and sometimes produced more uneasiness in the arm-pit, in the front and back parts of the chest, and at the lower part of the neck, than in the immediate seat of the injury. Again, if the wounds occupied the fore part of the leg, or were situated in the thigh, the pains were described as shooting upwards, and occasioning much uneasiness in the groin, back, loins, and abdomen.

In general, such were the symptomatic and local features of the disease in its first stage, in those cases whose gun-shot, grape-shot, and talwar wounds had nearly cicatrized, but were attacked by hospital gangrene subsequent to my arrival at Ferozepore.

In the secondary stage of the disease, into which the inflammatory condition of the injured parts rapidly passed, the surface of the wound exhibited a greater degree of lividity: the deeply inflamed edges of the wound were studded with numerous small dark livid specks, or gangrenous spots, of a jet black colour in the centre, and of a fine indigo-blue at the edges. The subjacent tissues, in the immediate vicinity of these gangrenous spots, became more tumid, more glossy, and more extensively infiltrated with a dark coloured fluid secretion; the adjacent parts were more painful to the touch, and boggy on pressure, a deep pit being formed by the point of the finger. The discharge from the surface and interior of the wound was scanty, acrid, high-coloured from the oozing of blood at particular points; in several cases a thick, tenacious, viscous, gluey, or paste-like coating adhered to the surface so firmly, that with difficulty it was removed by washing and sponging the part. With the progress of the inflammatory and gangrenous condition of the wound the constitutional irritation increased; the type of the fever became more acutely inflammatory; the pulse was quicker, fuller, less compressible, and more jerking under the finger: the pungent heat of skin, the flushed countenance, the blood-shot eye, the racking headache, the unquenchable thirst, the anxiety, the restlessness, the painful suffering endured by the patients, were all more acute in their character and more severely felt than in the first or preceding stage.

The transition from the second to the third stage was indicated by the rapid destruction of the skin and subjacent tissues; by the extension of the dark livid spots, observed on the preceding day, involving in one mass of gangrene all the intervening parts, the structures of which, although inflamed, had not been previously deprived of vitality; by the dark bottle-green appearance of the wound close to its edges, and for a short distance external to them, and by the black, charred, or frequently ashen-grey colour of the parts occupying the centre of the wound.

In the third stage of this gangrenous condition of the wound and surrounding parts, in several cases the centre of the wound in appearance bore a strong resemblance to a mass of decomposed, putrid, rotten flax, from the partially detached and discoloured shreds of tendon, from the separation of the muscular fibres, and from the distension and inflation of the cellular tissue, in consequence of the disengagement of sulphuretted hydrogen gas, and the secretion of a thin, sanious, dark, ashen-grey coloured fluid.

Beyond the line which marked the living from the dead structures, the inflammatory redness, although progessing with such fearful rapidity, retained the relative shades of colour noticed in the preceding stages—namely, in immediate proximity with the mortified parts the inflammation was of a deep dark red, bordering on lividity; at a short distance beyond this the colour was a deep scarlet red, which, more externally, faded into a light pinkish redness or erysipelatous blush.

The amputated limb, when attacked by this specific diffuse inflammation, terminating in gangrene of the cellular, muscular, and fibrinous tissues, presented the same characteristic features locally and constitutionally as the circular flesh-wounds produced by grape-shot and musket-ball. The amount of suffering endured by the patient was more severe; the risk from the greater extent of surface attacked was proportionably increased, and the consequence more unfavourable.

In the first and second stages of the disease, acute lancinating pains in the stump in general preceded the development of the inflammation; heat and tension of the skin, with a throbbing pain in the muscles at a short distance from the amputated part, were much complained of. The secretion of healthy pus was either arrested or completely changed in colour and consistence; an erysipelatous inflammatory redness pervaded not only the extremity of the amputated limb, but encircled the leg, the arm, or forearm, whichever member happened to have been amputated, for several inches above the stump. The appearance of the granulating surface, and the tumid, glossy, pouting, everted, and elevated edges of the amputated parts, differed in no essential particular from the description already given of grape-shot, gun-shot, and talwar wounds.

When this disease, which had attacked an amputated limb, baffling every attempt to arrest its progress, runs into the third, or gangrenous stage, the edges of the wound, whether recently agglutinated or previously well cicatrized, burst asunder, and became everted; the entire surface of the amputated limb gaped wide, was changed in colour, and exposed to view the internal structures of the stump: dark red, livid, and deep black streaks were usually observed traversing in a longitudinal direction the lips of the wound on their internal aspect. A thick, dark, fœtid, and acrid discharge, was secreted in abundance. Œdematous swelling of the limb, with rapid effusion into the bursæ and synovial membranes of the joint close to the amputated part, were marked features in two cases which suffered from the advanced stage of the disease.

The character of the fever in this, the third stage, did not invariably alter with the change which had taken place in the local condition of the wound, but more particularly in those cases of flesh-wounds, produced by grape-shot or musket-ball, where the change from stage to stage was rapid,—the work of a few hours.

The accompanying symptoms were those of high inflammatory fever, with quick, full, and bounding pulse; burning heat of skin; continued thirst; loss of appetite; foul, loaded, and sometimes brown-furred tongue; insomnia, restlessness, and increased anxiety. The local pain and burning heat experienced in the flesh-wound, or amputated limb, at the onset of the disease, were less complained of by the patient in this, the advanced stage: where, however, the termination of the case proved fatal, whether from an amputated limb, or a small flesh-wound having been attacked by mortification, the full, bounding, incompressible pulse, noted in the first and second stages of the disease, changed to a small, sharp, wiry jerk, exceeding 140 beats per minute, vibrating under the finger. The anxiety and restlessness of the patient, his despondency, his ill-bodings, his prescience of the danger of his situation, and the approaching termination of the disease, were striking features in three cases. At intervals they dozed away, muttering in a low delirious manner; involuntarily jerking their limbs about, as if the muscular and nervous systems were seized at the moment with convulsive spasmodic twitches. When aroused, and addressed in a forcible manner, their senses seemed collected; they answered rationally, but soon afterwards relapsed into their former state of restless drowsiness. A cold clammy sweat, with cold extremities, hiccough, dry, parched, brown, and fissured tongue, and a tympanitic state of the abdomen, generally preceded death.

The preceding description of the local appearances of the first, second, and third stages under consideration, with their attendant symptoms of constitutional disturbance, may be regarded as applicable to, and drawn from, the greater number of cases in the hospital. In some cases, however, the onset of the disease was so sudden and so unlooked for,—the spread of inflammation was so extensively diffused on the surface and amongst the deep-seated tissues, and succeeded by mortification of these tissues so quickly, that time was not allowed us to trace the transit of the disease from stage to stage. The wound, which was healthy in the evening, and was cicatrized satisfactorily on the following morning, presented an extensively inflamed and gangrenous surface; the disease spreading in every direction from the centre to the surrounding parts.

Gwalior, Oct. 6th, 1846.

[To be continued.]

ON THE

NATURE AND PRINCIPLES OF TREATMENT OF INFLAMMATION,

AND THE ALLIED DISORDERS OF THE CIRCULATION.

By George Robinson, M.D.

Fellow of the Royal Medical and Chirurgical Society, formerly Lecturer on General Pathology in the School adjoining St. George's Hospital, and now Lecturer on Forensic Medicine in the Newcastle-on-Tyne Medical School.

[Continued from page 707.]

Part VII.

It being thus, I think, rendered evident that inflammation and congestion are but two forms of the same disease, differing from each other in the *intensity*, and not in the *nature* of the pathological condition essentially constituting them, we must now assign some precise signification to the latter term, as it will probably still be used in medical writings. But before doing so, it is necessary to refer to an arrangement of cases of congestion sometimes observed by authors; I mean, their division into active and passive. Now the local disorder of the circulation, to which the term *active* congestion is applied, seems to me to be identical with that generally known as determination of blood, the pathology of which will be considered in the following part of this inquiry; while the term *passive* congestion I consider to express the existence of *a state of capillary hyperæmia, without much increase in the lateral pressure of that accumulated blood.* And when the term *chronic* is used to denote the *intensity*, and not the *duration* of inflammation, the pathological condition then present is very similar to that just described. I may here observe, that it is an error to suppose that the capillary congestion resulting from venous obstruction cannot produce the same morbid effects as that occasioned by any other cause; for the experiments so often referred to suffice to prove that the exudation of lymph is as clearly an effect of venous obstruction as the effusion of serum, or the extravasation of blood. Dr. Bennett, of Edinburgh, a recent and an able writer on inflammation, but who, like the great majority of pathologists and physiologists of the present day, trusts, perhaps, too exclusively to *unaided observation*, has the following remarks on this subject:—"Why it should happen that venous congestions are never accompanied by an exudation of blood-plasma, whilst arterial congestions are, is a point that no one has yet endeavoured to explain. To me it appears certain that all inflammatory effusions occur through the capillary or intermediate vessels, and not in such vessels as may be properly called arteries or veins. . . . . . But it is scarcely possible to suppose that the mechanical difference in the density of the filtrating membrane should constitute the only distinction. It is impossible to reconcile the phenomena without having recourse to some active vital power of attraction between the blood and the parenchyma, as formerly explained; a power which, operating in the one case and not in the other, causes different constituents of the blood to become exuded. We are compelled, in all our considerations of the subject, to go back to this explanation, as to an ultimate fact[*]." Now, with respect to the above-mentioned difference in the effects of arterial and venous congestions, instead of endeavouring to explain its occurrence I must dispute the fact; for extreme and continued *venous* congestion must necessarily be followed by *capillary* congestion, and if the lateral pressure of the blood detained in these delicate porous vessels be sufficiently great, the effusion or exudation of coagulating lymph will most certainly take place. I have extracted the other sentences from Dr. Bennett's work, for two reasons. In the first place, they represent, in a concise and clear manner, the views entertained on this question by many eminent pathologists; and they at the same time afford an instance of that preference of a *vital* to a physical, a mysterious to a simple, explanation of a given phenomenon, which, manifested as it so generally is by the most distinguished and talented members of our profession, cannot but exercise a very injurious influence on the progress of medical science. Having been thus candid in pointing out what I conceive to be a defect in Dr. Bennett's pathological reasoning, I cannot avoid expressing an opinion that his short treatise on inflammation presents a more complete and intelligible view of the subject, and is, at the same time, characterized by closer reasoning and more careful discrimination, than any other work which has yet fallen under my notice.

The preceding remarks will, I hope, suffice to establish the principle that the production of one or other of the immediate effects of inflammation is, in every case, *mainly* determined by the amount of pressure acting on the columns of blood contained in the capillaries of the affected part. If, therefore, it were always in our power to ascertain during life the nature of the accompanying effusion, we should have a very simple and natural arrangement of cases of inflammation under three heads, denoting as many shades of difference in the intensity of the disease. Acute inflammation could then be defined as capillary hyperæmia, with more or less extensive extravasation of blood; sub-acute inflammation would be that form of the disease in which the effusion of liquor sanguinis was the preponderating morbid phenomenon; and atonic, or asthenic, either of which is a better term than chronic inflammation, being a state of mere congestion, would present only a serous or aqueo-albuminous effusion. In some instances it may be possible to recognize this natural classification even during life, and, when practicable, some advantage may be found from its observance, as calculated to suggest the remedies best suited to the particular form of the disease then under examination. But as, in the majority of cases of internal inflammation, we cannot avail ourselves of this means of diagnosis, our opinion as to the relative intensity of the attack must be necessarily drawn from a consideration of other circumstances. And even were it always possible to use this general rule, it would require to be very much modified in its application to particular cases, by a constant reference to the anatomical structure of the part affected, the composition of the blood, and integrity of structure of its coloured globules, and various other considerations.

---

[*] A Treatise on Inflammation as a Process of Anormal Nutrition. Edinburgh, 1844. p. 39.

I mentioned, towards the commencement of this paper, that Mr. J. W. Earle had promulgated some views on the nature of inflammation very similar to those which I had been led to adopt. The parts of his communication which bear the greatest resemblance to my conclusions, will be found at pages 107 and 108 of the 16th volume of the MEDICAL GAZETTE. But as he reasons upon the supposition that the capillaries have no proper coats, being mere channels or grooves in a contractile parenchyma, I cannot very clearly understand how the process of effusion is to be accomplished. In a subsequent passage of his paper (p. 141), Mr. Earle, in support of his very mechanical doctrine as to the formation of pus, endeavours to shew that the several parts of the blood exude in the order of their fluidity; "the finest and most fluid first, and the largest and coarsest last." But he certainly carries the idea too far when he represents the red globules as passing in their turn through the minute pores of the parenchyma, and becoming there converted into pus-globules by the mechanical detention of their colouring matter in the meshes of the sieve through which they have to pass.

It is scarcely necessary to add, that the present inquiry embraces only the first stage of inflammation, in which the blood detained in the obstructed vessels retains more or less fluidity, and is consequently subjected to hydrodynamic laws. With the coagulation of the blood in its vessels the process of effusion ceases; and the changes which the effused matters and the solidified blood subsequently undergo form a branch of pathological inquiry totally distinct from that which I proposed to undertake on the present occasion. But even from the little attention which it has been in my power to give to this subject, I feel convinced that an investigation of the pathology of the secondary effects of inflammation, conducted on the principles previously indicated, could not fail to afford most important and interesting results. At present, the object which seems chiefly to engage the attention of pathologists is the determination of the order in which these changes occur, and of the nature of the minute structural peculiarities accompanying each. But is it not possible, as it is most undoubtedly desirable, to attain that higher and more beneficial knowledge, by means of which we may be enabled to refer the production of each one of these morbid effects to its own peculiar determining causes, and thus, to a certain extent, perhaps ultimately acquire the power of regulating, in each case of unsubdued inflammation, the nature of its ultimate termination?

Having thus endeavoured to demonstrate the pathological condition which essentially constitutes inflammation, and to explain the production of its immediate effects, I shall reserve some remarks on the influence of these views upon its treatment until the subject of determination of blood has been fully examined. It will be seen that I consider the mechanism and forces operating in the production of the immediate effects of inflammation to be identical with those which I previously pointed out as causing nutritive effusion. The only difference between the healthy and the morbid process is in the extent of the effusing surface and the intensity of the expelling pressure; and, as the consequence of these changes, an increase in the quantity of blood-plasma exuded. Hence my views on this point are substantially identical with those of Dr. Bennett and the majority of pathologists. But the phenomena which they regard as the effect of an unknown vital power, I am content to refer to the operation of a very simple physical cause. With them, however, I consider inflammation to be, in its essence, merely "an extreme degree of a natural and healthy action . . . occurring in parts where, or under circumstances when, its continuance is likely to disturb the nervous system, and thus effect the health of the individual, or to prove injurious or inconvenient from the effects to which it may give rise[*]."

---

[*] An Inquiry, &c. p. 61.

Of the Morbid Effects produced by an unnaturally increased Pressure of the Blood contained within the Arterial System.

Having thus endeavoured to shew that an anormal increase in the lateral pressure of the blood contained within the *minute* vessels of the affected part, is the immediate cause of those pathological phenomena which are considered to constitute the disease termed inflammation, it now remains to examine the operation of the causes which produce that allied local disorder of the circulation generally known as determination of blood.

This disorder, as its name implies, is an effect of an unequal distribution of the blood, and *consists in the accumulation of an unnatural quantity of that fluid in the arteries of a particular part*—the capillaries or minute porous vessels being comparatively unaffected. In their essential nature, and in the operation of their causes, determination and inflammation are very similar; the chief difference between them being constituted by the pathological phenomena which they respectively occasion. And this variety in their effects is a natural consequence of the different physical properties possessed by the affected vessels. For the thin membrane forming the parietes of the capillaries readily admits of the exudation of liquor sanguinis when in a state of unnatural compression, while the thickness and density of the proper arterial tunics effectually prevent the escape through them of any portion of the contained blood.

Before, however, considering the questions connected with determination of blood, it is necessary to refer to an analogous disorder of the circulation, of which the aorta itself is occasionally the seat. And the study of this physical peculiarity of the great mass of arterial blood is the more interesting, as it illustrates the operation of the causes producing a similar condition of the blood contained within the smaller vessels of the arterial system.

In a former paper on the physiology of the circulation, I pointed out the circumstances which influence the amount of lateral pressure exercised by the mass of blood contained in the aorta, and further observed, that " as this force is equally affected by a change in the condition of the heart, or of the smaller vessels, both which changes are continually occurring, it may, in the same individual, be at one time so slight as to be incapable of accomplishing its healthy uses, while at another period its distending power may be so considerable, as to rupture some of the containing vessels, and thus threaten the destruction of life."

The present communication having for its chief object the elucidation of the pathology of those forms of disordered circulation which consist essentially in a general or partial obstruction to the proper passage of the blood, we cannot here consider those cases in which, from a deficient accumulation of fluid in the aorta, the functions dependent on the distension of its elastic walls are imperfectly performed. But the omission of any further allusion to this point is the more excusable, as this disorder is perhaps more interesting, from its presenting an instance of the confirmation of a physiological law by pathological phenomena, than important as an agent operating in the production of structural disease.

From the principles previously established it follows very evidently that an increased lateral pressure of the blood contained in the aorta can only arise from one or other of two classes of causes—viz. either from causes which tend to induce a more rapid influx of blood by quickening the contractions of the ventricle, or from circumstances calculated to diminish the efflux of arterial blood by affecting the calibre, through the contractility, of the minute discharging tubes. And causes of each kind will, of course, occasionally co-operate in their action.

The causes accelerating the flow of blood into the aorta are, with the exception of bodily exercise and certain medicinal stimulants, chiefly of an emotional nature. That the force and frequency of the ventricular contractions are at once increased by anger and other passions, is a fact familiar to every one. And it must also be evident to every careful observer, that the lateral pressure of the aortic blood is at the same time augmented, and that this occurs in a ratio more or less intimately connected with the *abruptness of the application*, as well as with the intensity or power of the exciting cause of the quickened circulation. In no other manner can we explain the bursting of blood-vessels, so long noticed as an occasionally fatal effect of a fit of anger, or the equally striking instances recorded by surgical writers, in which ligatures upon large arteries have been displaced, and fatal hæmorrhage thus induced, in consequence of the patients being either affected by powerful mental emotion, yielding to the passions, or making some violent muscular effort. And, to take cases of more frequent occurrence, who has not during exercise personally experienced the very different sensations caused by a gradual and a sudden increase in the action of the heart? In the one case the arteries and capillaries seem readily to accommodate their calibre to the gradually increased quantity of blood poured into the aorta, and the only sensation induced by the accelerated circulation is a not unpleasant glow in the thorax, rapidly diffusing itself over the whole body. But when a person starts at once from a state of perfect repose to the performance of some feat requiring great and continued muscular exertion, various distressing and inconvenient phenomena immediately result. Under such circumstances the violent palpitation and tumultuous action of the heart, the painful distension felt in the cardiac region, and the unnatural pulsation of the large arteries, without any corresponding disorder of the circulation through the small arteries and capillaries, sufficiently evince the existence of a morbid accumulation of blood in the great arterial trunks. And the hurried panting respiration, and occasional expectoration of blood (if the person be at all plethoric), shew that the pulmonary circulation is similarly affected. The difficulty which the blood thus experiences in passing from the aorta into the smaller arteries is evidently occasioned by the resisting contractility of the capillary vessels; but as the same cause operates in the production of determination of blood, it may be most advantageously considered when speaking of the analogous disorder of the circulation through the smaller arteries.

Of those causes of an increased lateral pressure of the aortic blood which act by diminishing the efflux from the arterial system, the sudden application of cold to the extremities and surface of the body is perhaps the most frequent. And the contraction of the innumerable cutaneous capillaries, which we witness as its immediate effect, by rendering those vessels incapable of transmitting the usual quantity of blood, must necessarily cause an accumulation of that fluid in the large arterial trunks. The experiments of Poiseuille, moreover, shew that under such circumstances the heart exercises a compensating power, increasing the force of its contractions so much as to raise the pressure of the aortic blood considerably above its natural amount. In some instances where the bent tube was applied to the carotid after ligature of the aorta, the mercury indicated a pressure double the amount of that which had been previously observed. And the effect of the temporary obliteration of a great number of minute vessels upon the condition of the aortic blood is precisely similar, though of course less intense in degree.

In whatever manner produced, this unnatural amount of pressure of the aortic blood, acting equally in every direction, may occasion morbid effects from its distending influence upon the coats of the aorta; or it may affect the heart from its backward pressure; or it may cause the accumulation of an unnatural quantity of blood in the smaller arteries of the body. Each of these effects is worthy of a brief consideration, and the third is particularly interesting, from its presenting, on a more extended scale, those phenomena which, when confined to the arteries of a particular part or organ, constitute determination of blood.

The thick elastic walls of the aorta are, in their healthy state, so admirably adapted to the peculiar position of that vessel in the circulating apparatus, that their rupture under the distending pressure of the contained blood is never witnessed but as the result of arterial disease. It is true that we occasionally find great dilatation of the whole tube near its attachment to the heart, but it would appear almost a physical impossibility that any amount of lateral pressure which the arterial blood might derive from the ventricular impulse could, in the natural state of the aortic coats, induce their laceration. In cases, however, where their strength and elasticity have been diminished by previous disease, this force may and does occasion their rupture at the weakened points, and thus becomes the immediate cause of aneurism. And the same dilating pressure continuing to act upon the attenuated coats of the aneurismal sac, induces that laceration which generally conducts these cases to a fatal issue.

But in addition to its well-known action as the immediate or proximate cause of aneurism, it is, I think, almost certain that an habitual increase in the pressure of the arterial blood exercises an important influence in predisposing to that disease. And statistical observations, by shewing its more frequent occurrence in men than in women, and the peculiar liability to it of sailors and others whose occupation requires violent and sudden muscular exertion, contribute, with the fact of its most generally appearing during the prime of life, to give considerable support to the opinion. As a predisposing cause of aneurism this force may operate *directly*, by causing a certain amount of fibrinous exudation through the lining membrane of the aorta into the cellular space between it and the middle coat; or it may *indirectly* occasion the same effect, through the nutritious vessels or vasa vasorum. In either case the changes occurring in the patches of effused fibrine may be productive of the various physical and chemical alterations of structure which precede, and predispose to, the formation of an aneurismal pouch. A very slight consideration of the constant and reciprocal relation existing between the force and frequency of the ventricular contractions, and the amount of pressure of the aortic blood, will render it evident that any great increase in the latter force must inevitably produce considerable disorder of the heart's action. For the power exercised by the great instrument of the circulation in propelling the blood, varies with the resistance offered to the entrance of that blood into the aorta; and this resistance arises from the backward pressure of the fluid previously contained in that vessel. With the diminution of that pressure the contractions of the ventricle, in the absence of unnatural stimuli, become less frequent and less powerful; and the state of the circulation during sleep furnishes an interesting example of the operation of this law. But if, either from inordinate action of the heart itself, or from diminished calibre of the smaller vessels, the general and therefore the backward pressure of the aortic blood be unnaturally increased, the same compensating principle, continuing in operation, may give rise to very injurious and even fatal consequences. It has long been known that, in certain debilitated states of the system, a very slight exertion may cause momentary exhaustion and syncope; and where the constitution is very much enfeebled, as in mercurial erythismus, this syncope may be fatal. Now since a trifling increase in the resisting pressure of the aortic blood suffices, in these cases, to deprive the heart of its power of contraction, why may not the extraordinary obstruction to the flow of blood from the ventricle, constituted by the mass of fluid accumulated in the aorta during excessive and prolonged mental excitement or muscular exertion, occasion the same effect in an individual previously in the enjoyment of tolerable or even perfect health? And I cannot but think that, in many cases of sudden death, where no morbid appearances are perceptible, the fatal occurrence is referable to a paralysis of the heart consequent on this physical disorder of the circulation. It is certainly the most frequent immediate cause of death in all forms of heart disease, when the life of the individual has for a long time been, as it were, supported by a single thread. And in all chronic diseases, where the powers of life are slowly exhausted, a trifling addition to the pressure of the aortic blood, by inducing the dissipation of the slight remnant of contractile power yet possessed by the heart, is often the action which ushers in the fatal catastrophe.

But, irrespective of its exhausting influence upon the contractile power of the heart, this physical disorder of the mass of arterial blood operates as the immediate cause of the most common forms of ventricular disease. For whether there be simple hypertrophy of the ventricle, or hypertrophy with dilatation, or enlargement of the ventricular cavity with attenuation of its parietes, the pathological condition is, in each case, distinctly referable to the resistance or backward pressure of the aortic blood as its universal and proximate cause. And in the treatment of every form of heart disease, the prevention of a morbid accumulation of blood in the aorta, and the diminution of the pressure of the fluid mass to a point as low as is consistent with the proper performance of its physiological uses, constitute hygienic and therapeutic principles of the greatest importance.

[To be continued.]

ON IRITIS IN INFANCY. BY J. WALKER, ESQ., SURGEON TO THE MANCHESTER EYE HOSPITAL.

The author considers that iritis, when observed in infants, is most probably, in the majority of instances, owing to a syphilitic taint, propagated either before birth, or during the period of suckling, from the mother to the child. But it is not to be assumed that all cases are necessarily of syphilitic origin, since there is no reason why iritis should not occur independently of such a cause, as well in infants as in adults. In one, at least, of the cases which he has witnessed, there appeared to be no foundation for such an opinion.

In two of the cases which have come under Mr. Walker's observation, the disease was mistaken for one of still more serious description; a mistake which had been made, no doubt, because it was not supposed that young children were subject to the affection in question. Iritis as occurring in infants appears to have been nearly, if not altogether, overlooked by writers on ophthalmology. It certainly is not a very common affection, but occurs sufficiently often to demand the attention of practitioners. The author has himself witnessed not less than half a dozen cases in as many years.

The symptoms of the disease in question are very different from those of the ordinary ophthalmia of infants. The conjunctiva is but slightly affected, so that there is rarely any mucous or purulent secretion observed. The sclerotic coat is generally inflamed, and hence the deep-seated and pink-coloured vessels are often numerous, and there is usually considerable intolerance of light, and lachrymation. But it is principally in the iris and capsule of the lens that the more striking and characteristic symptoms are noticed; thus the colour of the iris is usually changed, its brilliancy materially impaired, and its movements are sluggish, if not actually suspended, the pupil being usually much contracted, and sometimes of a very irregular shape. The morbid action rapidly extends to the capsule of the lens, as indicated first by a muddiness in the pupil, and subsequently by a deposit of lymph, which soon becomes organized, and is permanently adherent to the texture of the capsule. The danger to vision in these cases will depend upon the amount of opacity of the capsule, or of the contraction of the pupil. If either of these conditions is extensive, and likely to be permanent, then an unfavourable, or at least a guarded, prognosis should be given.

In the treatment of this disease we must rely chiefly on internal remedies, and such as affect the system at large. In most cases it will be useful to apply leeches to the palpebræ, in such numbers as are suitable to the age and constitution of the child. Purgatives, and in some cases even nauseants, should be freely administered in the first instance; but these must not be allowed to supersede the employment of mercury. Small doses of calomel, or of the hydrargyrum cum cretâ, should be administered without delay, and continued until the progress of the disease has been arrested, or the system has been brought under the influence of this agent. Belladonna should also be applied in the usual manner. In some instances an evaporating liquid may be usefullly prescribed in the more acute state of the disease.

Mr. Walker relates two cases as illustrating the above remarks. In the first of these instances, occurring in an infant seven months old, there does not appear to have been any reason to suspect a syphilitic taint. The disease had commenced about fourteen days previous to Mr. Walker's being consulted. Another medical man had given it as his opinion that it was a case of incipient fungus. Under active treatment the vascularity of the external tunics disappeared, and the lymph that had been deposited on the anterior surface of the iris was absorbed; but the pupil remained permanently contracted, and the capsule of the lens opaque.

The second case was that of a child aged six months. The eye had been inflamed about three weeks, and within the last week an opacity was perceived in the centre of the pupil. On the forehead were six or seven copper-coloured spots, about the size of a three-penny piece, which were first noticed a few days before the eye became affected. When six weeks old, the hands and feet were almost covered with similar blotches, and there were some about the arms, for which medicine was administered, and the eruption disappeared.

Under treatment upon the plan detailed above, the inflammatory action entirely ceased; the pupil was moderately dilated and apparently fixed, the iris appeared dull, but the deposits had disappeared from its surface; several irregular streaks of organized lymph were still observed on the capsule, and will probably be permanent.—*Abridged from the Provincial Med. and Surg. Journal.*

MEDICAL GAZETTE.

FRIDAY, DEC. 11, 1846.

We made some remarks in our last number upon the mode in which the election of coroners takes place, objecting to it as being based rather upon party or political principles, than upon any test of skill or competency in the candidate, to discharge the duties of this important office. We also endeavoured to shew, that, having a due regard to the nature of these duties, well-trained medical men are by their professional pursuits specially fitted to act as coroners; but so long as the present vicious mode of popular election is allowed to prevail, it must serve as an effectual bar to their general appointment to the office. Many of them want the moral courage, and others are destitute of the means, to go through the forms, and incur the serious expenses, which are necessarily attendant on a contested county election.

The framers of the Health of Towns Bill have indirectly expressed their disapproval of this mode of electing a public officer, by the wording of the two clauses of that measure, which refer to the appointment of a Medical Officer of Health. There can be no doubt that counties and boroughs are as deeply interested in the appointment of an individual to this office as to that of coroner: but a county election is in this case wisely dispensed with, and good proof of skill and experience is very properly demanded of the candidate. As, from what we can learn, the two clauses respecting Medical Officers of Health are likely to be incorporated in the measure proposed to be brought forward by the present Government early in the next session of Parliament, we think it advisable to lay them in this place before our readers, premising that the 175th clause refers to the mode of appointment, and the 176th to the duties of the newly appointed officers in reference to coroner's inquests.

175. *Appointment of medical officer of Health.*—And whereas the health of the population, especially of the poorer classes, is frequently injured by the presence of epidemical and other disorders, and the virulence and extent of such disorders are frequently due and owing to the existence of local causes which are capable of removal, but which have hitherto frequently escaped detection from the want of some experienced person to examine into and report upon them, it is expedient that power should be given to appoint a duly qualified medical practitioner for that purpose; be it therefore enacted, that it shall be lawful for the said Commissioners to appoint, subject to the approval of one of Her Majesty's principal Secretaries of State, a legally qualified medical practitioner, of skill and experience, to inspect and report periodically on the sanatory condition of any town or district, to ascertain the existence of diseases, more especially epidemics increasing the rates of mortality, and to point out the existence of any nuisances or other local causes which are likely to originate and maintain such diseases and injuriously affect the health of the inhabitants of such town or district, and to take cognizance of the fact of the existence of any contagious disease, and to point out the most efficacious modes for checking or preventing the spread of such diseases, and also to point out the most efficient means for the ventilation of churches, chapels, schools, registered lodging-houses, and other public edifices within the said town or district, and to perform any other duties of a like nature which may be required of him; and such person shall be called the Medical Officer of Health for the town or district for which he shall be appointed; and it shall be lawful for the said Commissioners to pay to such officer such salary as shall be approved of by one of Her Majesty's principal Secretaries of State.

176. *Medical Officer of Health to perform post-mortem examinations on order of Coroner.*—And be it enacted, that whenever it shall be lawful for any coroner to summon medical witnesses and to direct the performance of a post-mortem examination, under the provisions of an Act passed in the session of Parliament held in the sixth and seventh year of the reign of his late Majesty King William the Fourth, intituled, "An Act to provide for the Attendance and Remuneration of Medical Witnesses at Coroners' Inquests," it shall be lawful for such coroner to issue his order for the attendance of the medical officer of health for the town or district within which any such inquest shall be held, and to direct the performance by such medical officer of a post-mortem examination, with or without analysis of the contents of the stomach or intestines, without fee or reward; and any provisions contained in the said Act for imposing any penalty on any medical practitioner for any disobedience of any order of such coroner shall be taken to extend and apply to such officer of health.

If, in the new measure, the latter of these two clauses should become law, we shall have this anomaly. A medical practitioner of *skill and experience* will be placed possibly under the control of some rural conveyancer, very respectable it may be in his proper calling, but who may be as little qualified as the parish-beadle, to determine in what cases post-mortem examinations and analyses should or should not be made. It is impossible that a system which places the experienced in a position subordinate to an inexperienced man, can work well. A medical officer who is really qualified to act under this clause, ought undoubtedly to be entrusted with the power of determining in what cases inquests should be held. His qualifications must obviously render him fully competent for this duty, so important as it affects the liberty of the subject, by preventing the holding of unnecessary inquests,—and, as it relates to public justice, by the institution of post-mortem examinations in those instances only in which a disinterested professional man may consider them to be absolutely required. The legislature would have sufficient power over him to enforce an honest and strict performance of his duties, and the mode in which he would be paid for his services would place him beyond the temptation of holding inquests unnecessarily. The legislature, however, still leaves this power in the hands of one from whom no proof of skill and experience, or even of the commonest capacity for the performance of the duties, is demanded. The law of 1365 (28th Ed. III.), is in this respect made the basis of that which was passed in 1844 under the reign of Victoria!

We sincerely believe that one effect of the present mode of electing coroners is to discourage many persons belonging to the medical profession, and fully competent to the performance of the duties of the office, from coming forward,—while it is in some cases open to incompetent persons by purchase. We have known more than one instance in which a well qualified medical practitioner has shunned the semi-political contest for an office which has no kind of political relations; nor, when we consider the humiliating form of canvass which must be undertaken on such occasions, can we be surprised at this result. It is true that there is commonly no lack of candidates; for the profits of the office, as it is at present conducted, are in many cases sufficiently large to serve as a tempting investment especially to country attorneys. We have heard of an instance on excellent authority, where the office of county coroner was actually purchased by an incompetent person for a large sum of money sufficient to buy a majority of the votes! Although a legal practitioner, his incompetency was so glaring that in less than a year afterwards, he was compelled to resign his office. In an election which took place in another county, we have it on good authority that four thousand pounds were expended by the two candidates! A vacancy lately occurred in the same county, when one medical and no less than *six* legal candidates immediately offered themselves. In a legal periodical now before us, we read that the solitary representative of the medical profession in this case went round the county addressing the freeholders, soliciting their votes at the election: and it is stated that many freeholders who voted had to be brought to the hustings from a distance of thirty miles!

It is scarcely credible that such an absurd mode of electing an officer, whose principal duty consists in taking *inquests of death*, should be tolerated in the nineteenth century. That numerous abuses should follow is not surprising: thus we have occasionally indecent conflicts between county and borough coroners respecting their jurisdiction,—struggles over a dead body for fees,—several inquests by different coroners on the bodies of persons who have perished by a common accident*, —the frequent holding of inquests, with less regard to the absolute necessity for the inquiry or the proper determination of the *cause* of death, than to their own pecuniary benefit,—the neglect of post-mortem examinations, and the dispensing with medical evidence even where it is absolutely required, in order that their accounts may be reduced to a minimum, and receive the approval of a board of magistrates,—a practice which has of late been followed by the disinterment of dead bodies after the lapse of several years, and the discovery that the deceased had died from poison, when the previous verdicts had recorded "natural death!" We are not aware that we are here overstating facts: we believe that the experience of many of our readers will immediately suggest to them cases in which instances of gross mismanagement like those which we have described, have occurred within their own knowledge*. These remarks certainly do

---

* The Legislature has been obliged to interfere recently in one case by passing an act respecting jurisdiction. Until lately it had been a disputed question whether in the event of death from violence the inquests should be held by the coroner in whose district the violence occurred, or by him in whose district death took place. These disputes led to the desecration of the dead by the transport of dead bodies from one county to another. The question has at length been set at rest.

* That these strictures are not undeserved, will, we think, be apparent from the following extract, taken from the *Times* newspaper, relative to an inquest held at Dover in February 1846, on the bodies of twelve men who were killed by an explosion of gunpowder. Some exception was taken to Mr. Thompson, the borough coroner, holding an inquest on the bodies; but he said he had had a legal opinion on the subject, and that the bodies were then within his jurisdiction. After the examination of many of the witnesses, the report proceeds:—"A considerable sensation was created by the appearance in the room where the jury were assembled of a gentleman muffled in a large wrapper and a drab great coat, who announced himself as Mr. De Lassaux, coroner for the Canterbury division of the county of Kent, marching up to where Mr. Thompson sat.

"Mr. De Lassaux said that he had not come to interrupt the proceedings of the borough coroner, but he thought it as well to state that if any person died in the county, and was afterwards removed within the borough, that would not bring the case within the jurisdiction of the borough coroner. He would therefore hold an inquest to-morrow at 10 o'clock, on the bodies of those men who had died in the county.

"Mr. Thompson (the borough-coroner) explained to his learned brother functionary the course which he had adopted, and again referred to the opinion of Mr. Serjeant Manning as his authority for acting on the occasion

"Mr. De Lassaux then mildly informed Mr. Thompson, that if his return on the investigation exceeded the limits of his jurisdiction, he (Mr. De Lassaux) would apply to the Court of Queen's Bench to quash the inquisition, on the ground that the borough coroner had no power over bodies killed in the county.

"Mr. Nash, on the part of the South Eastern Company, protested against a second inquisition, as uselessly entailing additional expense on them. Being told, however, by both the coroners that it was a matter entirely between them, and in which the company was not concerned, he suggested that they ought to amalgamate, and so get rid of the difficulty. (Laughter.)

"Mr. de Lassaux said that it was impossible to do so, and quoted as a precedent a case that had occurred at Milton-bridge, near Canterbury; in which it was decided that the city coroner had no jurisdiction over deaths in the county.

"The foreman of the jury here rose, and finding himself backed in the objection (to a double inquest) which he had made at the commencement not apply to all coroners; for we know among them men who have on all occasions manifested an earnest desire to discharge the duties of their office in an honourable and conscientious manner. Our censure is directed entirely to a system which allows of the frequent occurrence of such practices, by leaving the appointment to a most responsible office, in the hands of a venal and ignorant rabble,—of men who are utterly incapable of judging of the qualifications requisite for the proper performance of its duties. We confess that we shall be heartily glad to see this office handed over to well-qualified medical men; but an entire change in the mode of election must be previously made. A medical practitioner, in order to obtain an appointment for which he may be professionally so well fitted, ought not to be reduced to the necessity of canvassing and bribing his own pauper patients,—of making interest with a beadle or parish vestry, — or of addressing a riotous and drunken mob for two successive days from the hustings! If it be urged that it is easier to offer objections than to suggest a remedy, we shall reply that the Health of Towns' Commissioners have saved us the trouble. They propose to appoint, under a new legislative measure, Medical Officers of Health, whose duties and responsibilities will be just as onerous and just as local as those of coroners; and, without resorting to a mock Parliamentary election, they have suggested a plan for the appointment of the officers which is certain to be attended with public good. We do not see why this or a somewhat similar mode of appointment should not be adopted with respect to the office of coroner.

Reviews.

Animal Chemistry; or, Chemistry in its applications to Physiology and Pathology. By Baron Liebig, Professor of Chemistry in the University of Giessen. Edited by W. Gregory, M.D. F.R.S.E., Professor of Chemistry in the University of Edinburgh, &c. Parts I. and II., pp. 258. London: Taylor and Walton. 1846.

When the first edition of this work appeared, the judgment of the profession and the public was as it were taken by storm. Highly laudatory articles from, as we have reason to believe, very friendly pens, appeared in the Quarterly and Edinburgh Reviews: and medical writers began to bring out essays on the treatment of disease, based upon Liebig's principles, hoping to derive some portion of honour and celebrity by sheltering themselves under the wings of him whom the Edinburgh and the Quar-

---

of the proceedings, renewed that objection with increased confidence.

"Mr. De Lassaux, after expressing his regret at the interruption he had caused, and having again announced his intention to hold an inquest to-morrow, withdrew from the room, evidently in high wrath at the invasion of his jurisdiction.

"It should not be omitted, that in answer to Mr. De Lassaux's objection, that the bodies should not have been removed within the borough at all, Mr Nash explained, that apart from what humanity dictated, it was the only course which could be followed with regard to them.

"While this little interlude was going on within, and diversifying the tragic details of the inquiry, the county coroner's beadle, who has a fee of 6s. 8d. on every dead body, was actively engaged without in his own appropriate department. The relations of the dead men were just about to remove them previous to interment, when this official interfered with his badge of authority to prevent the act, thus completing the unworthiness of a scene which outraged the painful solemnity of the occasion."

In the *Times* Newspaper of the 2d March, 1846, it was stated that the county coroner *having seized on the bodies of the sufferers*, proceeded to hold an inquest on them! The coroner is reported to have explained to the jury the violation and vindication of their rights, &c. &c.

We shall leave our readers to consider how far such proceedings are decorous and proper; and whether the time has not arrived for the Legislature to interfere in order to prevent their occurrence. In an accident which took place very recently (November 1846) by a colliery explosion at Oldbury, where nineteen persons were killed, *three separate inquests* are reported to have been held, because the bodies of the sufferers lay in three separate counties. One inquiry would surely have sufficed for all the purposes of justice. Imagine the judges of the three Courts, of Queen's Bench, Common Pleas, and Exchequer, struggling among each other for suitors and cases! It is no answer to say that coroners must act in this indecent manner so long as the law remains in its present state, because we are endeavouring to show that a law which tolerates such indecencies requires immediate alteration.

terly had pronounced to be the great renovator of modern chemistry. The interval of a few years has, however, given rise to some revulsion of opinion; and the heterodox question has been for some time propounded in medical circles—Can Liebig be safely trusted in the practical application of his doctrines? Some persons have even gone so far as to entertain a doubt whether men can be fed and supported or, have their ailments cured, by resorting to ingenious hypotheses which deal with their lungs as locomotive furnaces, and with their kidneys and livers as laboratories on a small scale. Far be it from us to deny that even in the first edition of this work there was not clear proof that the author was a man of original mind, and that many of his hypotheses opened views with regard to the functions of the animal body of which modern chemists had not before dreamed: but then we think that his merits as a *discoverer* were considerably overrated. Without meaning to impugn the veracity of his statements, they have all along appeared to us to require an impartial examination at the hands of practical men of a less ardent and enthusiastic temperament; men who have no hypotheses to support, and who would be therefore in a better position to pass a cool judgment upon them. There was a time when every function of the body was explained by reference to mechanical laws: even the stomach was looked upon as a gizzard: but the speculations of Borelli have given place to those of Liebig, and now every change in the body, material or psychological, every phenomenon in physiology and pathology, is referred to purely chemical laws. Extreme opinions of this kind will, of course, have their way for a time; and as the greater number of persons look to alleged results, instead of closely examining the steps whereby they are obtained, so it must happen that a bold speculator will never be in want of earnest admirers and enthusiastic followers.

One circumstance which has always struck us as a prominent feature of Baron Liebig's hypotheses is, his consummate tact and ingenuity in winding into them well known and universally admitted facts, and thus giving apparently an easy and simple explanation of what every one knows to be true. To illustrate our meaning we will take two instances. The Samoyedes, Swedes, and other inhabitants of northern regions, live upon train-oil, blubber, tallow, and other kinds of fat. The large quantity of carbon and hydrogen thus consumed becomes, according to Liebig, absolutely necessary to them in order to prevent the combustion of their bodies by the condensed state of the oxygen (from cold) in the air which they breathe! This explanation at first sight appears very clear and satisfactory; and, admitting the assumption to be true, that a Samoyede or a Swede does actually take into his system *more* oxygen than the inhabitant of a warmer latitude, we appear to have at once a beautiful accommodation of Providence in loading all Arctic animals with fat; so that they who inhabit these latitudes may find around them precisely that description of food which will prevent them from undergoing spontaneous combustion by the respiration of an Arctic atmosphere! If, however, this be true of man, it must be true of all animals which breathe; and here we encounter a physiological difficulty in the fact that the reindeer breathes the same destructive atmosphere: but, instead of living upon blubber, pure fat, and other hydrocarbons, it contrives to exist and thrive upon vegetable food, and during winter, upon a dry farinaceous moss*! If, then, the rein deer can, under these circumstances, defy the Arctic oxygen, we cannot perceive why, with a diet of beef and bread, the *genus homo* might not do the same; and we confess we have a lurking suspicion that if any philanthropic speculator would only try the experiment, he would find that a Samoyede or a Swede would under this diet be equally able to withstand the respiration of air condensed by cold. The truth is, the inhabitants of northern regions live upon that food which is the most easily accessible to them. The diet of man, in quantity and quality, is undoubtedly influenced, to a certain extent, by climate: this has been long known, but there is an entire want of proof, that the elementary nature of

---

* The Rein Deer Moss, *Cladonia Rangiferina* (*Cenomyce Rangiferina*, LINDLEY).—The winter food of the animal.

proper performance of its duti
confess that we shall be hear
to see this office handed over
qualified medical men; but a
change in the mode of electi
be previously made. A medic
titioner, in order to obtain an

---

of the proceedings, renewed that obje
increased confidence.

"Mr. De Lassaux, after expressing
at the interruption he had caused, a
again announced his intention to held
to-morrow, withdrew from the room,
in high wrath at the invasion of his ju

"It should not be omitted, that in ans
De Lassaux's objection, that the bod
not have been removed within the b
all, Mr Nash explained, that apart f
humanity dictated, it was the only cou
could be followed with regard to them

"While this little interlude was
within, and diversifying the tragic det
inquiry, the county coroner's beadle,
fee of 6s. 8d. on every dead body, was ac
gaged without in his own appropriat
ment. The relations of the dead men
about to remove them previous to i
when this official interfered with his
authority to prevent the act, thus comp
unworthiness of a scene which ontr
painful solemnity of the occasion."

In the *Times* Newspaper of the 2
1846, it was stated that the county
having seized on the bodies of the suffer
ceeded to hold an inquest on them !
ner is reported to have explained to the
violation and vindication of their rights

We shall leave our readers to cons
far such proceedings are decorous an
and whether the time has not arrive
Legislature to interfere in order to prev
occurrence. In an accident which to
very recently (November 1846) by a col
plosion at Oldbury, where nineteen pers

his food is necessarily regulated by the variable proportion of oxygen contained in a given bulk of the atmosphere from changes of temperature.

The use of tea and coffee was ingeniously drawn in the same way to support the author's view that the principles theine and caffeine were easily capable of being transformed into bile; and ingenious formulæ were contrived to demonstrate how readily they might be metamorphosed into taurine. From the first edition* we learn that one atom of caffeine or theine has only to pick up somewhere in the body, nine atoms of water and nine atoms of oxygen, and it immediately becomes transformed into two atoms of taurine,—a principle which represents 0·171 parts of nitrogen in 100 parts of fresh bile! Then, we are told, "*if* an infusion of tea contain no more than the one-tenth of a grain of caffeine, still, *if* it contribute in point of fact to the formation of bile, the action even of such a quantity cannot be looked upon as a nullity." The facts that tea and coffee, as articles of diet, are of comparatively modern introduction, and that their use is at present far from universal, with the entire absence of any evidence to show that the secretion of bile has been at all increased or diminished, or in any way improved or modified, since their introduction,—or, that it is at all affected by their withdrawal, are surely sufficient to demonstrate that the hypothesis here set up has not even the shadow of a foundation.

The greater the reputation a man has acquired the more necessary is it to examine his doctrines, since they must have a wide-spread influence either for good or evil. The sayings and doings of men who have acquired a name are too apt to be received without critical examination; and we believe that there are many who have been the loudest in praise of Liebig's peculiar opinions, who would have denounced them as outrageously absurd had they emanated from an unknown and obscure theorist.

In the edition before us, of which we have the first Part and a portion of the second, Baron Liebig has had the good sense to act as his own critic; and it is easy to perceive that his opinions have not only been revised, but have undergone very considerable modifications. Thus, we do not now meet with his extraordinary theory of emphysema as described at page 115 of his first edition. Nevertheless, after a perusal of the work, we must express ourselves dissatisfied not merely with the matter, but with the manner in which the author deals with his subject. On some of the most important questions of physiology, we find a loose and discursive style of reasoning, occasionally replaced by an impenetrable mysticism. Thus, in the following paragraph, we are told that every thought produces some chemical change in the composition of the brain.

> "The most ordinary experience further shews that at each moment of life in the animal organism, a continued change of matter more or less accelerated is going on; that a part of the structure is transformed into unorganised matter, loses its condition of life, and must be again renewed. Physiology has sufficiently decisive grounds for the opinion, that every motion, every manifestation of force, is the *result* of a transformation of the structure or of its substance; that every conception, every mental affection, is followed by changes in the chemical nature of the secreted fluids; that every thought, every sensation, is accompanied by a change in the composition of the substance of the brain." (p. 8).

The author, in adopting this *sic volo sic jubeo* style of reasoning, entirely omits to tell us what are the very *decisive* physiological grounds for this extraordinary statement. As it stands, it is a mere speculation put forward in the guise of ascertained truth.

Take also his theory of *life* :—

> "As in the closed galvanic circuit, in consequence of certain changes which an inorganic body, a metal, undergoes when placed in contact with an acid, a certain something becomes cognisable by our senses which we call a current of electricity; so in the animal body, in consequence of transformations and changes undergone by matter previously constituting part of the organism, certain phenomena of motion and electricity are perceived, and these we call life and vitality." (p. 11).

We must beg to remind the author, however, that the physiological idea of life is not quite so simple as he here represents it to be. A chicken when hatched undoubtedly gives signs of motion and activity, and these phenomena may in some respects bear a remote analogy to the electricity evolved in a closed galvanic circuit; but is there no vitality in the egg? and if not, how is the chicken formed from it? Its feathers, bill, claws, blood, and bones, have undoubtedly their respective elements in the albumen; but what is the power which produces this extraordinary rearrangement of parts, whereby the liquid contents of the egg are converted into a solid organism, which is always identical with that of the bird which laid the egg? Liebig's explanation does not meet the difficulty; for, until we find that the inorganic body, a metal, mixed with an acid and a little clay, can spontaneously assume the shape of a galvanic battery, and close its own circuit, so that electricity is evolved, the analogy wholly fails. The conversion of the egg into a chicken may be a sort of *plumose* fermentation of the albumen: most physiologists, however, think that a principle of vitality is concerned in this transformation, and that it cannot be ascribed either to the laws of chemistry or mechanics. This does not, however, appear to be Baron Liebig's opinion; for at page 44 we find him explicitly stating, that

---

* Page 180.

> "The only known ultimate *cause of vital force*, either in animals or in plants, is a chemical process. If this be excluded, the phenomena of life do not manifest themselves, or they cease to be recognisable to our senses."

We confess we do not see how the vital force which exists in an egg or an acorn can be said to be *caused* by a chemical process. One set of chemical changes takes place in both when vitality is present, and another set when it is absent: this would appear to show that vitality does in some way or other exert an influence on the chemical changes; but then it follows either that the author's theory of life is unsound, or contrary to what is generally taught by logicians and metaphysicians: the effect must influence the cause!

In reading the work we cannot avoid being struck with the astonishing fractional accuracy of certain quantities of elements, which at first sight it appears scarcely possible to measure or to weigh. At page 13, we are told, that 13$\frac{9}{10}$ oz. of carbon (!) escape daily through the skin and lungs as carbonic acid gas; and, further, at page 44, we are informed, that

> "The 13$\frac{9}{10}$ oz. of carbon which are daily converted into carbonic acid in the body of a soldier" [why take a military man?] "give out consequently as much heat as would suffice to heat 74$\frac{1}{2}$ lbs. (!) of water from 32° to the boiling point, or to dissipate in vapour 11$\frac{9}{10}$ lbs. of water."

If this close calculation be correct, men might easily admit of a sort of calorimetrical comparison with each other, and have their representative weights calculated in coke or anthracite, or their heating capacities in definite quantities of hot water and steam. This sort of calculation, however, reminds us of the conclusion of a learned statistician, who, after a most laborious investigation, found that it required a certain number of men and an odd five-eighths of a man to perform a certain amount of work per day! The fact is, some results, as expressed by figures, appear to be *too* accurate, and tend to create distrust. As the whole calculation here is based on theoretical averages, it would, in our opinion, have been wise in the learned author not to have held out for the tenth of an ounce of carbon, or the third of a pound of water! Yet this principle pervades the whole of the book. To those who are practically acquainted with the difficulty, if not utter impossibility, of determining such weights, it necessarily conveys the impression that the author is dealing with a series of assumptions, having only a mere outward appearance of arithmetical accuracy.

Baron Liebig is very fond of making use of what we shall denominate inferential facts; *i. e.* he first derives his facts from his theories, and then proceeds to reason from them as if they had been actually proved to be true by experiment. Thus he says:—

> "It is obvious that in an equal number of respirations we consume more oxygen at the level of the sea than on a mountain. The quantity both of oxygen inspired, and of carbonic acid expired, must *therefore* (*!*) vary with the height of the barometer. The oxygen taken into the system is given out again in the same forms, whether in summer or winter; because we expire more carbon in cold weather, and when the barometer is high, than we do in warm weather; and we *must* (*!*) consume more or less carbon in our food in the same proportion: in Sweden more than in Sicily; and in our more tem-

perate climate a full eighth more in winter than in summer."—p. 16.

Here the reader will perceive that we have a string of assumed facts. No attempt is made to show by experiment that persons really do consume more oxygen at the level of the sea than on a mountain. According to our experience in the ascent of mountains,—at the height of ten and twelve thousand feet, the respirations are, in reality, much more frequent than they are at the sea level; and therefore a man in this situation, due regard being had to the lowness of the temperature, may consume just as much oxygen as another breathing at the sea level. If the author has had no opportunity of settling this point by personal observation, why not have determined by experiment, whether, as he positively asserts, the quantity of oxygen inspired and of carbonic acid expired, varies with the height of the barometer? Why not have attempted to prove by experiment that a healthy man really does expire more carbon in cold weather, or when the barometer is high, than in warm weather, or when the barometer is low? Why not have at least attempted to prove that the quantity of carbon varies in our food accordingly,—that the lungs of a Swede differ from those of a Sicilian in receiving less oxygen, and that it is an invariable rule that the Swede requires and consumes much more carbon in his food than the Sicilian?* Many of the alleged facts might have been easily verified or disproved by experiment even in the four years which have elapsed since the first edition of the work: but they still present themselves to us as closet speculations, and as such we place no confidence in the reasoning deduced from them.†

Let us take another specimen of an inferential fact:—

"Alcohol, when in the human body it is converted into carbonic acid and water, requires for this purpose 12 eq. of oxygen: and there are produced 4 eq. carbonic acid, and 6 eq. of water. The air in which a man breathes, in whose organism the elements of alcohol are employed for respiration, must consequently diminish in volume. For every 12 volumes of oxygen taken up by the blood from the atmosphere, only 8 volumes are returned in the form of carbonic acid; while 4 volumes are given out in the form of water, and disappear as far as measurement is concerned, since they lose the gaseous form."—p. 139.

We have here a positive statement, as if the balance and eudiometer had been in constant requisition in the examination of the air inspired and expired by spirit-drinkers, yet the whole of this is hypothesis: no attempt has been made by the author, so far as we can ascertain, to verify alleged results which are here, as the reader will observe, marked down with the most astonishing precision. In this instance, as well as throughout the work, we never find a line drawn between assumed and real facts, or between hypotheses and the actual results of experiment. The author invariably leaves the reader to make this discovery for himself.

We have not yet done with these inferential facts, which we *do not* hesitate to pronounce to be the bane of true science, and in the end the surest obstacle to its progress. Our author lays down, in an axiomatic way, that the respiratory process differs in carnivorous and herbivorous animals, both in its form, and in the time which it occupies. How does he attempt to prove it? Not by experiment, but by the following ingenious piece of reasoning.

---

* We are disposed to doubt whether Liebig can have lived among the inhabitants of the two Sicilies, or have had any opportunity of observing their mode of living. They consume large quantities of olive oil and butter in their food, and do not live entirely upon oranges and melons, as this respiration-theory assumes! It will be time enough to admit the existence of this ratio between the amount of carbon in food and the latitude in which a man lives, when there are some facts adduced in its support.

† It is well known, that we may have a very low barometer with intense cold—a condition for which no provision appears to be made by this theory. Physical geographers generally allow that three hundred feet of altitude are equal to one degree of latitude; and thus the climate of the North Cape is found in Switzerland at the height of 7200 feet. The Monks of the Convent of St. Bernard, who live at the height of 9764 feet above the sea level, with the barometer at 19 inches, and the thermometer generally at or below the freezing point, are found to thrive very well upon ordinary food. While the intense cold necessarily creates a great demand for carbon and hydrogen in the food, there is on Liebig's theory a positive deficiency of oxygen from the rarefied state of the air, owing to the great diminution of pressure. During a comfortable residence of three days with the monks, with the external thermometer at 24° at midday in August (!), and the barometer under 20 inches, we did not find that oil or fat formed a conspicuous article of food. If it be said there was less oxygen to breathe, it still follows that animal heat may be very well maintained at a low temperature, without an excess of hydrocarbon in the diet.

"Carnivorous animals whose food on the average cannot differ much from the flesh of the calf (unfattened), or of the hare, receive therefore (!) in their food, a far smaller quantity of non-nitrogenised substances, than herbivorous animals do; and it follows evidently (!) that in these two classes of animals, the respiratory process must be (!) different, both in reference to its form and to the time during which it takes place."—p. 121.

It is very likely that some difference may exist, but we would beg to ask whether this is the proper way of applying chemistry to the elucidation of intricate physiological problems? We think our readers will agree with us that a single experiment would be more satisfactory than a thousand speculations of this description.

The present edition furnishes an apt illustration of the mode in which Baron Liebig works out an hypothesis. He is desirous of showing how oxalic and other acids may be derived from carbonic acid; and the demonstration, which occupies about two pages, is carried on by the following extraordinary series of propositions.

"If now it be beyond a doubt that all the carbon of plants is derived from the carbonic acid of the atmosphere," &c. "If we imagine the constitution of carbonic acid to be analogous to that of the organic acids," &c. "If we consider C O to be one equivalent of the Radical, and call it R." &c. "If we now suppose that in the organism of the plant, the carbonic acid has been decomposed, and ⅛, ⅐, ⅙, ⅕, ¼, ⅓, or ½ of its oxygen separated," &c. "If we now suppose further that in the carbonic acid, it is the oxygen external to the radical, which is replaced by hydrogen," &c. "If we again suppose that all the oxygen both in the radical and external to it, is replaced by hydrogen," &c.—pp. 99-100.

We assure our readers that all these *ifs* and suppositions occur at the heads of paragraphs in about two pages, and in reference to one question. We by no means wish to undervalue the utility of hypotheses for the arrangement and combination of facts imperfectly associated; but we think the most strenuous advocate of them will not consider such a series of assumptions as likely to advance a science which, above all others, boasts of being strictly experimental. It would surely be better to assert at once that carbonic acid is converted into other organic acids, than to attempt to account for the change by such an unsatisfactory mode of reasoning.

In treating of the fæces, Baron Liebig informs us that the amount of carbon in them bears a certain proportion to the quantity of indigestible or insoluble matters contained in the food.

"The weight of the fæces of a horse, fed on hay and chopped straw, is greater than in the case of a cow fed on turnips. The frontiers of the Lower Rhine provinces and of Westphalia, where the bran or the husk of the grain is eaten in the bread of the country, may be recognised by the peculiar colour and consistence (!) as well as by the remarkable bulk (!) of the remains of preceding meals left by wayfarers under the bushes and hedges" (p. 152).

The notion of determining the boundary of a country by the colour, consistence, and bulk of these roadside deposits, or recent coprolitic formations, is something quite new in ethnical geography; but we fear from the numerous accidents by which the physical characters of such deposits are liable to become altered, that this method of recognising frontiers will not be very available in practice.

While upon the subject of the fæces, we must observe that the author appears to us to involve himself in a contradiction. At page 82 we are told, without any qualification, that the fæces contain no fat; but at page 95 we are informed "that accurate experiments prove that the fatty and wax-like matters of the food, which are soluble in ether, are partly recovered in the excrements, &c.

In many instances Baron Liebig takes results on the authority of others, the correctnesss or incorrectness of which he might easily have tested by experiment. He deals thus with Denis's statement of the conversion of fibrin into coagulable albumen by digestion with a solution of nitre. He makes an important use of this alleged fact in some of his theories; but he does not appear to have tried the experiment, which has entirely failed in the hands of other chemists.*

---

* The protein hypothesis of Mulder owed its diffusion chiefly to its adoption by Liebig in the first edition of his Animal Chemistry. He has now ascertained, by experiments which should have been performed long before, that protein has no existence; and this recantation of opinion has led to an angry controversy between Mulder and himself. See vol. xxxvii. p. 440.

We had marked down many other passages for comment, but we must here bring our remarks to a conclusion. The latter portion of the work, the commencement of Part II., treats of the metamorphoses of the animal tissues. A large portion of this has been recently published in a separate form by the author under the title of Chemistry and Physics applied to Physiology; and as we have already commented upon this Essay*, it calls for no further notice in this place.

We regret that we have not been able to express a more favourable opinion of the work before us. The author has appeared to us to rest too much upon the reputation which he has already acquired; and although the present edition is free from many of the errors of the preceding, yet we think the extracts which we have given will suffice to show that many very questionable doctrines have been allowed to remain. If, as it is not improbable, the work should reach a fourth edition, we hope to find that the author has abandoned assumptions for facts. Until then, this Treatise, while it will fail to give satisfaction to practical men, can tend but little to the advancement of medical science, or the improvement of medical practice.

Principles of Human Physiology; with their chief Applications to Pathology, Hygiène, and Forensic Medicine. By W. B. Carpenter, M.D. F.R.S. 3rd Edition. 8vo. pp. 776. London: Churchill. 1846.

When we compare these Principles with the old "Elements" of "Richerand," the standard physiological treatise in England only twenty years ago, we may acquire some idea of the immense progress which has been made during this period in the study of human physiology. The researches of the microscopist, and the improved analytical processes of the chemist, have contributed to produce a complete revolution in that most interesting branch of science, which teaches us the laws and principles under which the phenomena of life are manifested. The most material changes have been undoubtedly wrought by the microscope. By the aid of this instrument, the most intricate structures of the body in a healthy and morbid state have been revealed, old theories have been exploded, and new paths of investigation, promising rich discoveries, have been struck out.

In the elaborate work before us, which has already reached a third edition in the short space of four years,—a sufficient proof of the high estimation in which it is held by the profession,—the author has spared no pains in accumulating information from all authentic sources, to place it on a level with the present improved state of physiology. He has especially availed himself of all the discoveries which have been recently made by the aid of the microscope in regard to to the solids and fluids of the body,—a fact sufficiently obvious from the numerous well-executed wood engravings with which the work abounds. Many of these are now for the first time introduced. The principal additions to this edition are, a chapter on the varieties of the human race, based on the researches of Dr. Prichard, and an extended account of the primary tissues. A selection of the most important and most recent physiological discoveries has been introduced under the appropriate sections.

Dr. Carpenter's "Principles" may be regarded as the standard English treatise on physiology,—a work alike creditable to the author and to English medical literature. The volume is well printed in clear and legible type, and is illustrated with a large number of beautiful and accurate engravings.

A Few Notes on Cruelty to Animals; on the Inadequacy of Penal Law; on General Hospitals for Animals, &c. &c. &c. By R. Fletcher, Esq. Consulting Surgeon to the Gloucester General Hospital, &c. 8vo. pp. 105. Longman and Co. London, 1846.

The possession of strong feelings of true humanity is unquestionably the most indispensable requisite in the character of a surgeon. There is a natural revolting of the mind at the sight of animal suffering, inherent to every person of kindly and sensitive character, which it is, of course, absolutely necessary, as well for his own comfort as for the safety of his patients, that the medical man should acquire the power of absolutely controlling at the very outset of his career; but true compassion has nothing whatever to do with that morbid feeling which quails at the sight of blood, and which aggravates, by its indecision, the sufferings it essays to relieve. Maudling sentimentality and excessive sensibility, which are invariably the results either of mental or physical deficiency, or of intense selfishness, are quite incompatible with true philanthropy; but we hold it to be equally impossible that one, who, during any lengthened period, has proved himself to be a really bad and incapable operator, should possess an ordinary share of humanity and rectitude, as that a truly conscientious and kind-hearted professional man should pursue his career without possessing high qualifications of skill and knowledge. A man of right feeling, to whom the health and the lives of his fellow-creatures are entrusted, will never, for one instant throughout the whole of his career, be regardless of the principle, that for every pang which his unnecessary carelessness has inflicted upon a patient,—for every disease which his remissness or his culpable incapability has allowed to be aggravated, and for every life which his rashness or his ignorance of attainable facts has permitted to be lost,—a crime of deep and fearful character is registered against himself; a sin the more terrible, from the fact that its effects can never be repaired. The expression of Rawleigh, that "the blood which hath once been poured upon the ground can never be gathered up again by repentance," carries with it as strong a lesson to the healer of the sick as to the absolute ruler of an empire. A consciousness of incapacity has driven many a right-minded man from the practice of our profession; and, although it would be deplorable that such a result should ensue from the effects of a morbid fancy, we are confident that a man of strict integrity would prefer to labour through his existence as a hewer of wood or a drawer of water, rather than continue the practice of medicine or surgery to the evident disadvantage of his patients.

---

* See page 843.

These remarks have been called forth by a little work on cruelty to animals, written with great evidence of humane feeling, and with considerable force of argument, by an hospital-surgeon. Mr. Fletcher's work is not particularly addressed to the profession; but is, we have no doubt, the result of feelings engendered by the circumstances of a professional career. Its details do not fall within the scope of a medical review, and, therefore, we shall not attempt to analyse its contents, or to reason upon the author's benevolent but somewhat Utopian scheme of imitating the Hindus in the institution of hospitals for animals; but must be content with expressing our satisfaction that the composition of such an essay as this should have occupied the leisure hours of an hospital-surgeon. Mr. Fletcher has shewn much tact and consideration for the profession, in not referring, in a work intended for the public, to the subject of physiological experiments upon living animals, as it is one which would have afforded very ample scope for his humane arguments. It cannot be doubted that, wherever the destruction of any number of the lower animals could be rendered the means of preserving even one solitary human life, or even of mitigating the sufferings of a single individual of our own race, the former alternative should be at once adopted; and therefore it may, in some cases, happen that the effects of serious operations or powerful drugs may very justifiably be tried upon the lower animals before they are employed in the human subject; but it appears to us that the utility even of this practice is exceedingly contracted, as many drugs which act very powerfully upon the human system produce no ill effects in brutes, and *vice versâ;* and as the success of operations upon healthy animals affords no certain test of the safety of similar measures in our own persons: a very strong illustration of this fact was afforded by Sir Astley Cooper's experiments in tying the abdominal aorta, and in obliterating the common carotid and vertebral arteries, of rabbits and dogs—experiments which are now understood to be far more successful in those animals than in the human subject. But we have long been perfectly confident, that, in all matters of curiosity and mere physiological interest, not involving questions of medical treatment, the mutilation of living animals is perfectly unjustifiable. It has more than once appeared to us that it lay in our power to resolve with certainty, by a series of vivisections, doubtful physiological questions which had long engaged our attention, but we were compelled to decide that the resolution of our difficulties would be too dearly bought by the infliction of prolonged suffering. No man, who has once endured the passage of steel through his own flesh, will ever feel willing to inflict unnecessary incisions either upon a patient or upon creatures whose organization is, in a very slight degree, less perfect than his own. We are happy to find that the most distinguished anatomist of our own country considers that anatomical and physiological research may be pursued with full success without having recourse to the mutilation of living animals. If the records of physiology be carefully examined, it will be found that very few discoveries indeed, of any substantial value, have resulted from this mode of inquiry; and we trust that, in a few years more, the practice will be wholly abandoned, except under circumstances of absolute necessity.

We have often felt surprised that no really experienced and practical man has of late years devoted his attention to the means by which pain may be most easily and safely relieved in the treatment of disease. It cannot be concealed that this is a matter with regard to which many excellent surgeons have been avowedly callous, and from which the habit of operating is remarkably liable to withdraw the attention. The exercise of our art must always be productive either of perceptible good or unmitigated ill: timid and inefficient measures are as injurious in the surgeon's hands as violent and desperate ones; but, whenever we have seen an operator inflict an unnecessary gash, employ muscular force when careful manipulation would have sufficed, engage his fingers in fumbling about a wound while awaiting the arrival of some necessary instrument, or arrest the attention of bystanders by repeatedly eliciting the crepitus of a fracture, we have deeply felt how greatly it would be to the benefit of humanity did a dictatorial power exist which could, at the instant, deprive that man of the power to outrage humanity by future acts. But happily such instances are extremely rare; and the introduction of the principle that the knife is the surgeon's last resource, together with the vast improvement which has of late years taken place in the mode of performing surgical operations, are clearly rendering it less and less probable that any of our own contemporaries will be able to say with Abernethy* that, "before and during their time, hospital surgery in England was a dreadful calamity; that punishments were constantly perpetrated upon human beings in the public hospitals and military establishments of the country far more frequent and severe than could be inflicted upon them for the worst of criminal offences." It would be tedious to dwell upon the various lesions and diseases requiring operation which the improvements of modern times have robbed of their greatest terrors; but, among these, stricture of the urethra and stone in the bladder, injuries to the head, aneurism of the extremities, and diseases requiring amputation, may be cited in illustration of the principle that sound anatomical knowledge, and great manual dexterity, are the chief means by which a surgeon is enabled to diminish the severity of his operations. However, as we have before hinted, we should be glad to see this important question fully discussed by a really practical man.

The Scientific Phenomena of Domestic Life familiarly Explained. By C. F. Gower, Esq. 2nd edition. 8vo. pp. 151. London: Longman & Co. 1846.

An interesting little miscellany for young persons. The object of the author is to explain in familiar language the different chemical and physical changes which are constantly taking place before our eyes; and the causes of which are eagerly sought after by the young, sometimes rather to the perplexity of the old. This little volume, therefore, may be regarded as a key to the solution of many questions on natural phenomena, and, as such, it is well adapted to the capacity of a juvenile reader.

The application of final causes to the explanation of natural phenomena should be made with caution, especially in works intended for the young. The author in general adheres to this rule, but in some instances he appears to us to depart from it: *e. g.* at p. 35, where he tells the reader to "consider the consequences that must result if air increased in weight by becoming warmer: every respiration we made, the vitiated air would descend, till in a short space of time it would have accumulated so as to reach our mouths, and we should then be as effectually suffocated by the flood of noxious vapour as if we were to remain in the channel of the Thames till the water flowed over our heads." This statement is incorrect; and therefore the simile is erroneous. Gases which differ in density (even as much as ether and mercury among liquids) invariably mix together on contact. The author, to make his explanation good, must first of all annihilate the law of *diffusion*. On the whole, however, Mr. Gower's explanations of "scientific phenomena" are correct, and conveyed in intelligible language.

---

* As quoted by Mr. Leeson.

Medical Trials and Inquests.

HIGH COURT OF JUSTICIARY.

Edinburgh, Nov. 6th, 1846.

TRIAL FOR MURDER.

Trial for Murder by poisoning with arsenic—evidence from symptoms, post-mortem appearances and chemical analysis—failure of direct proof of administration—acquittal of the prisoner.

THE Court met this day, and proceeded to the trial of Janet Campbell or M'Lellan, accused of the murder of her husband by means of poison, on the 3d of July last, in their house near Dunning, in Perthshire.

Hugh Barclay, Esq. Sheriff-Substitute of Perthshire, and John M'Lean, writer in Perth, proved the depositions emitted by the prisoner.

Hugh M'Gregor, mason, Logiealmond, was then called and examined. He resided in Dunning in July last, in the house of the prisoner's husband, better than fourteen days before his death. Recollects Friday, the 3d of July last, two days before the death of M'Lellan. Came home to his breakfast from his work, and found the deceased and prisoner in the kitchen; the former was throwing up, and appeared to be very unwell; did not hear him say what had occasioned it, but merely said he had been taken ill after breakfast. The breakfast consisted of porridge. He went away, and came back again at two o'clock. M'Lellan was then in his bed. Saw him up and going about on Saturday evening, the day following; asked him how he was, and he answered he was "a good deal settleder." Saw him next on Sunday morning going out to see his bit of land, from which he returned between eight and nine o'clock to breakfast. The prisoner prepared the breakfast that morning both for him (witness) and the family; it consisted of tea; but, as usual, witness had his breakfast at his own table, and from his own tea-pot. Deceased commenced his breakfast, and in a short time after was joined by the prisoner. Immediately after deceased had finished his breakfast he went to bed, and remained there for some short time, when he rose and went out; did not hear deceased say anything when he went out, but thought he was ill and like to vomit. The next thing witness saw was prisoner coming in and saying that "a man was carrying up the laird," meaning M'Lellan, who was commonly known by that name; believes the man was called Robertson; deceased was retching violently at the time, but not vomiting much; complained of much pain in his stomach, and after a short time was put to bed. Prisoner was in the kitchen at the time; she said he (M'Lellan) had been asking for a vomit on Friday, and that she would go to Dr. Martin for one. Deceased said he wanted to see Dr. Young. Prisoner answered, that she did not want to go east the toll; that he (the deceased) would be better before night; and that her going would raise a speculation. She did not go for either Dr. Martin or the vomit. Deceased asked witness to go for a doctor, and he accordingly went for Dr. Young, who came. M'Lellan died between three and four on that (Sunday) evening. Was never asked about destroying any rats about the house. *Cross-examined* by Mr. Fraser—Remained in the kitchen the whole time deceased was at his breakfast; observed nothing peculiar in prisoner's manner or appearance that morning. Dr. Young's place was some distance from the house; did not know it himself, but found it from the directions given him by the prisoner. Never observed any quarrelling between them while he was in their house. When deceased was brought in by Robertson, prisoner appeared to be anxious, and placed a chair for him when he was brought in. *By the Solicitor-General*—Was out of the house until one o'clock on Sunday; remained until about ten minutes before deceased's death; asked prisoner if she had given the vomit, and she showed him a bottle she had got; told him she had gone out with the doctor for a mustard plaster; prisoner said to witness that the doctor had told her it was rumoured through the town that she had put poison amongst the meal; made no answer. *By the Court*—Deceased was a healthy man, and ad-peared to be in his general health on the Wednesday and Thursday preceding; does not recollect of his complaining previous to breakfast on the Sunday; deceased might be near done with his first cup when his wife joined him; saw her sit down at the table; but could not say whether she joined in taking part of the breakfast, or only sat down. When deceased rose and went to bed he had his clothes on; he lay down on the bed-clothes. He heard of the death of M'Lellan in the street. During the whole of the time he was in the house did not hear M'Lellan make any allusion to the breakfast, food, or cause of his distress. The brother-in-law of deceased and his wife were sent for; prisoner went for them herself; witness was at that time left alone with deceased, who endeavoured to speak, but was unable.

Alexander Robertson, Dunning, labourer, sworn—Lived near M'Lellan, and knew him well; he was between sixty and seventy years of age, and a hale healthy man. Remembers his death on a Sunday in July last; deceased had a byre attached to his house; saw him in it that morning; he was lying, or rather on his head and knees. When witness went in deceased was not vomiting; but the place had the appearance as if he had been doing so. When witness lifted him, he retched violently; deceased said he was in great pain, and added, "Sandy, I'm gone!" Witness asked deceased regarding the pain, and he said his heart was "burning" or "tearing," or words to that effect. Witness was called into the byre by the prisoner, as he was passing at the time. He assisted deceased to the house, prisoner going before. When they were in the house, deceased said he wondered if Young could do him any good, (meaning Dr. Young). Prisoner remarked that she thought there was no occasion; witness thought so too, as he did not consider deceased so ill; did not hear anything said about speculation. Deceased was retching violently after he was brought into the house. By Mr. Fraser—The prisoner called on witness, and took him to where her husband was lying.

Margaret Davidson, daughter of Charles Davidson, used to go to M'Lellan's for milk. I remember one day, after the death of the twins, of Mrs. M'Lellan sending me an errand. She asked me to go for arsenic from Dr. Martin, and also for laudanum. She gave me 2d. for the laudanum and a penny for the arsenic. She said it was for mice. I went to Dr. Martin's, but his shop was not open. I then went and told my mother, and afterwards went to Dr. Martin's, and got laudanum only. As far as I recollect, this was about seven o'clock in the morning. My mother said I would not get arsenic unless two witnesses were present. I gave the prisoner the laudanum, but I gave her the penny before going back to the shop the second time. The prisoner remarked, she would get the laird to go for the arsenic. By the Court—When I went up the second time to the prisoner's house, I told her that my mother told me I would not get the arsenic, unless in presence of two witnesses; upon which she said she would get the laird to go.

Helen Aitken—Had got a present of some milk from the prisoner about a fortnight before her husband's death. She had never done that before. She sent for me the same week, when I was at work at the loom. She sent three times; first, two days after getting the milk; it was in the afternoon. She also asked if I would get her 1d. or 2d. worth of poison to destroy rats in her milk-house. I purchased some that night from Dr. Young, in Dunning. I just asked for poison. I got it in a little parcel in a paper, but I did not notice any mark on it. I said to Dr. Young that it was to kill rats. I gave the poison to Mrs. M'Lellan. After this occasion, Mrs. M'Lellan sent for me the week before her husband died. I went to her in the evening. I saw the prisoner and the boy again. Mrs. M'Lellan said it would be a great obligement if I would get some more poison, as the mason (there were two lodging with her) had tramped upon the saucer in which the former quantity had been placed. She gave me a shilling, and next day I went to Dr. Young's, but finding it shut, I went to Dr. Dougall's shop, and got 1½d. worth of poison. I got the poison in a paper, but I did not read what was marked on it. I gave it to the prisoner in her own house. These were the only two occasions on which the prisoner had sent me for poison. All this took place within a week before M'Lellan's death. On taking up the second quantity of poison, I met Agnes Pearson on the road.

Janet M'Lellan, wife of John M'Lellan, and sister-in-law of the deceased.—I first heard of the deceased's illness on the Friday, when I saw him twice in the forenoon. He was very bad, but at that time the vomiting had ceased. I was not sent for, but heard from the neighbours that he was unwell. At my second call he was still in bed. On Saturday he called at my house about eight o'clock in the evening, and on Sunday was in my house before breakfast. He was then in good health. I saw him afterwards about eleven o'clock, when I found him very ill and in bed. I went away and returned before twelve o'clock, when he was in the same state. A little past eleven o'clock I saw prisoner, and said I was going in, upon which she said he was much better, and that

I need not mind. I saw him again shortly before his death, but he was then incapable of speaking.

Henry Martin, sheriff-officer—On Monday, the 6th of July, I went to Dunning. I arrived about half-past seven A.M. I searched the house, but found no poison of any kind, or papers with the word poison written upon them. I found two tea-pots which had tea-leaves in them. I gave one to Dr. Malcolm and Dr. Thompson. I gave them one only, because the prisoner said the other one had been used the previous night. (Here the Lord Justice-Clerk severely rebuked the witness for not giving the medical men both tea-pots, and for taking the prisoner's word about them.) It was the tea-pot used that morning that I gave to the doctors. There was a jelly-pot, out of which some jelly had been taken. The only bread in the house was some oat cakes.

Dr. Young, Dunning, deponed to having been sent for on the Sunday, to see deceased. Gave him a little warm water to aid his vomiting—deceased said he had been taking breakfast, and that he had taken suddenly ill. The prisoner said, he had to breakfast, tea with scones and some jelly. He had some difficulty in swallowing. Witness had heard a report of the deceased having been poisoned, and the symptoms were quite in accordance with such a thing. I saw him again about one, when he appeared to be dying—I took away some of the stuff which deceased vomited, to which I applied the liquid tests, and one of them indicated the presence of arsenic. Mrs. M'Lellan, three weeks before the death of her husband, applied to me for poison to destroy rats, but I did not give it to her, because of the reports that were current, and also because of the way in which she asked for it; she said, "*will* you give it to me?" I attended the prisoner in her confinement, and was told that the children belonged to Gow. Remembers selling poison to Helen Aitken, upon either the Monday or Tuesday before M'Lellan's death. She got as much for a penny as would kill at least four men. She also said it was to kill rats. *Cross-examined*—The prisoner assisted me to take away a part of the vomited stuff to be tested. *By the Court*—About one o'clock I stated to the prisoner my suspicion. This was when she was going along the road to get some mustard, when I said to her she had better be aware what she was about, as there were strange reports afloat. She expressed surprise, and asked what reports? I said she might soon know; and that was all that passed. Looking to the whole symptoms and circumstances, deceased appeared as if he had taken a dose of arsenic. At one o'clock there was a coma, but not of long extent, and then he departed suddenly.

Dr. Dougall, Dunning, deponed to selling poison to the girl Aitken on the Thursday previous to M'Lellan's death. It was put in blue paper, and marked "poison." Aitken said it was to kill rats in her father's house.

Dr. Martin, Dunning, does not recollect the prisoner ever buying any poison from him. There is a lad who is an assistant at the Post Office, and who sells common things in my absence.

Dr. Thomson, Perth, read a report on the *post-mortem* examination of the body of the deceased, made by witness and Dr. Malcolm of Perth, on the 6th of July, and also on an analysis of the contents of the stomach and other parts of the body. In the latter they gave it as the result of their repeated analysis that they found arsenic to a considerable extent in the stomach, also in the liver, a much smaller quantity in the lungs, but none in the leaves or in the tea-pot. They gave it as their opinion, taking the symptoms of the disease which led to the death, and the result of the analysis, that James M'Lellan died of poison, and that the poison was arsenic. The witness thought, considering the state in which the stomach was found, that it had been administered shortly before death, or a short time before the symptoms appeared.

The evidence of the next witness went to show that husband and wife had lived unhappily in consequence of the wife having recently had children (twins) by another man.

Dr. Malcolm shortly certified the two reports read by Dr. Thomson.

Simon Fraser, criminal officer, deponed to having received a box with bottles containing the matter for analysis from Dr. Thomson, which he delivered to

Professor Christison, was next called. He had been so unequivocally satisfied of the presence of arsenic in the substance contained in one of the bottles, that he did not analyse the others.

The depositions of the prisoner were then read. She stated her age to be forty, and denied that Gow was the father of any of the six children which she has borne; she distinctly denied having had any poison in her possession, or of having employed any person to buy it for her, or mixed it with any kind of food. She also denied that the girl Aitken had been in her house during the whole of the week previous to her husband's death.—This closed the case in support of the prosecution.

The Defence.

William Ogilvie, employed at the Post Office of Dunning, and assistant to Dr. Martin—During the period between the burial of the twins and the death of James M'Lellan, he called while he was in charge

Elizabeth Flockhart—Knew
and long. At one time he had
dresses to her, but she had
Was aware that this refusal ha
on his mind; and had known
to poison himself. This was
ago.

This closed the evidence for t

The Solicitor-General then
address the jury for the Crown
menced by stating his firm be
that they had that day heard mu
to return a verdict of guilty aga
fortunate woman now at their b
the first question, whether the m
from the effects of poison, and
cently administered, there could
shadow of a doubt. The whole
the evidence—which was so cle
need not read it—went to prove
and if any special declaration was
give it greater effect, it was fou
evidence of the high medical auth
had examined, by the most app
mical tests, the contents of the s
the unfortunate man. The secon
tant inquiry—important not only
soner but to the public—was, h
whom was that poison administere
them look back to the circumsta
them bear in mind that there was
the house except the lodger—no o
pare the food except Mrs. M'L
them look at the extraordinary
which existed between the prisone
man Gow—let them look to the
and they would find them all tendi
criminality of the prisoner. Did
circumstances point to th

bar to the gallows. But grant that the point of possession was established, let it be remembered that there were two persons in the unhappy household; and he would ask the jury whether the evidence of William Ogilvie did not satisfactorily prove that poison was asked—urgently asked—by the unfortunate deceased himself. Why did he seek to become possessed of poison? If they assumed that it was for an innocent intention on his part, why should not the same assumption be made in favour of the prisoner? But, looking to the state of his mind, as described by some of the witnesses, might he not have resolved on suicide? If he had been refused poison in his own name, he might have obtained it by the aid of another—he had ample opportunity of getting it otherwise. Again, was there evidence to show that the fatal catastrophe might not have been the effect of accident? The jury could not have listened to the evidence of the witnesses without being persuaded that the procurement of arsenic in Dunning was one of the easiest and simplest things in the world. Let them also consider the conduct of the prisoner when it was reported that she had poisoned her husband. She never indicated any of that excitement or apprehension which generally accompanies a consciousness of guilt. On the contrary, she gave every facility for the conducting of medical investigation of the case. Indeed, there was nothing in the whole history of this trying transaction that was not reconcilable with her innocence. Looking to the whole of the circumstances, and claiming the full benefit of the doubt in favour of the prisoner, he (Mr. Patton) would call upon the jury to give the case a partial and humane consideration, the result of which, he felt assured, would be to acquit her of the great crime laid to her charge.

The Lord Justice Clerk charged the jury. In regard to the argument that the deceased might have committed suicide, his lordship drew the attention of the jury to the fact of M'Lellan having been twice unwell, and to consider whether, if they were satisfied that both on the Friday and the Sabbath it was occasioned by poison, it did appear likely that a man determined on suicide would proceed in such a way. In regard to the evidence of the witness Aitken, perhaps the fact of her having two natural children was the very reason she had been selected by the prisoner to buy the poison. As to the weight that should be attached to her evidence, the jury would keep in mind the testimony of the little girl Davidson, who had been another but unavailing instrument of the prisoner's to obtain poison, as also the depositions of the accused herself, in which she denied having employed any person at all to buy poison for her. The learned judge, after reading over the lengthy evidence, remarked, in conclusion, that if the jury were satisfied that M'Lellan died by poison taken in his own house at breakfast, then the case was reduced to the single question, who was it that added the poison to the food?

The jury retired, and after deliberating for fifty minutes, returned a verdict, finding, by a large majority, the charge *Not Proven*. The prisoner was then dismissed from the bar.

Remarks.—This case serves as a good illustration of the extreme difficulty of establishing a charge of murder in cases of arsenical poisoning. Even if we had not the verdict of "*Not proven*" of the jury, to support the inference, it is scarcely possible to read the details without feeling that the moral evidence of guilt was exceedingly strong, if not conclusive. A large number of cases annually break down in this country from the same deficiency of *direct* proof of the administration of poison, which appears to have led to the discharge, we cannot say *acquittal*, of the prisoner in this instance. But how rarely can this *direct* proof be procured! It is contrary to the very nature of the crime to expect it, and yet our judges are so frequently found to insist upon its production, and in its absence to charge the jury favourably for the prisoner. In almost every instance, proof of the homicidal administration of poison must be based on an inference from circumstances;—but to ensure conviction, the circumstances, according to some judges, must not be capable of receiving by any even the remotest possibility any other conceivable explanation than that which implies the guilt of the accused. The jury here probably gave the prisoner the benefit of a doubt; but so guardedly that she has not been turned upon society with a character free from stain—or, according to the English practice, as an innocent person falsely accused of a diabolical crime!

The case further illustrates the want of a check upon the sale of poisons. It is said that other means of death would be resorted to, if poison could not be procured. Those who make this ingenious objection, forget that most other means of violent death carry with them much clearer evidence of the perpetration of *murder* than is met with on charges of homicidal poisoning. Had this woman been debarred access to poison, she might have murdered her husband in other ways; but then we doubt whether, with clear proof of the *cause* of death, she would have so easily escaped. Our readers will observe here, that a *pennyworth* of poison, enough, as he says, to kill four persons, was retailed by a *Doctor of Medicine* to an ignorant woman! We subjoin the following remarks in reference to this case from the Caledonian

Mercury, the journal from which we have taken our report of the trial.

"Considerable sensation has been caused, and especially in the legal circles, by the strange verdict which a jury returned on Thursday last, in a charge of murder from the parish of Dunning. The trial will be found reported in our paper of this day, and sure we are that no one can peruse the evidence without coming to the conclusion that the crime was clearly made out against the party. Notwithstanding the strength of the evidence, the jury, by a plurality, returned a verdict of 'Not proven.' We can understand that the duty of a juryman is very painful in a serious case of this nature, and so is that of the Court. But jurymen take a solemn oath to return a true verdict according to their consciences. If a juryman has no rational doubt of the guilt of the party, and still takes refuge in that bastard verdict 'Not proven,' from a regard to the consequences of conviction, then that juryman perjures himself, for it is a clear violation of the oath under which he sits. In regard to the present case we have no business to inquire what were the motives that swayed the majority of the jury, but we are entitled to say that their verdict is considered quite at variance with the evidence, and therefore an irrational conclusion; and we regret to see the righteous administration of justice thus thwarted."

It is not impossible, as the writer suggests, that an anti-punishment-of-death feeling, among the majority of the jury, may have led to a verdict so strongly conflicting with the evidence. We are sorry to have to express an opinion that in some criminal trials which have taken place in England, the same feeling has prevailed among medical witnesses, and has been allowed to influence their evidence; so that, forgetting their oath to swear to the *whole* truth, there is reason to believe that they have given only such evidence as would be favourable to a prisoner accused of a capital crime. Such conduct is disgraceful, and is totally subversive of the administration of all justice. It strikes at the very safety of society; for it tends to shelter those who have been guilty of crimes affecting life;—and the proof of which must in many instances rest almost entirely upon scientific evidence. We shall take care to expose any case of this kind that may come before us. An unintentional mistake or omission in medical evidence is pardonable; but the wilful suppression of facts and opinions, because they might, if expressed, lead to the capital conviction of a person charged with crime, admits neither of palliation nor excuse.

Proceedings of Societies.

MICROSCOPICAL SOCIETY.

Oct. 14th, 1846.

J. S. Bowerbank, Esq. F.R.S. President in the Chair.

A paper by John Anthony, Esq. "On a method of rendering the appearances in delicate structures visible by means of oblique transmitted light." This method depends upon the placing the object in such a position that the fine lines or other delicate markings are exactly at right angles to the illuminating rays; when these lines, &c. will be at their maximum of distinctness, and thus tissues may be rendered distinctly visible whose existence, when viewed in the ordinary manner, might be considered as exceedingly doubtful. The object employed to illustrate this position was the navicula of the Humber, one of the most delicate of test objects, which, under ordinary circumstances, appears perfectly transparent, but when viewed in this way not only exhibits a double set of lines, but also transverse lines, giving the whole the appearance of being covered with a delicate net-work. Four drawings of this object were exhibited, shewing it in as many different positions, making a complete revolution of the field in which the markings just mentioned were distinctly visible. In order to bring out these appearances it is necessary that the light should be very oblique, and must be passed laterally through the "*bull's eye,*" in such a manner that the object (the navicula) may appear of an intensely blue colour, nearly opaque. The stage is then to be gradually turned round until the shell is in the position to be best seen as described.

Nov. 11th, 1846.

A paper was read by Mr. John Quekett, entitled, Additional Observations on the Intimate Structure of Bone. The author, after alluding to a previous paper on the same subject, read before the Society in March last, in which he described certain characters peculiar to the bones of each of the four great classes of the vertebrate kingdom, by which a bone of each class could be easily distinguished; and after pointing out the importance of this subject to the palæontologist and geologist, in enabling them to determine the nature of any fossil fragment of bone, however minute, went on to state that he had ascertained that the cells of the bone bore a certain relation, in point of size, to that of the blood-discs: thus, for instance, the blood-discs were found to be largest in reptiles, smallest in birds and mammalia, and were in fishes of an intermediate size, and he had discovered that the bone-cells followed the same law. In the present paper Mr. Quekett stated the results of his examination of the structure of the bones of the perennibranchiate reptiles, viz. syren proteus and oxolotl, which have the largest blood-discs of all the vertebrata, and he found that in them the bone-cells were the largest also, which fully bore out and confirmed his former statement. Diagrams were exhibited which represented the bone-cells in the human subject, the ostrich, turtle, syren, and lepidosteus, when magnified 450 diameters, by which means their characteristic differences were rendered very evident.

A second paper by John King, Esq. Ipswich, was read, on a Method by which all Objects may be Polarized under the Microscope. The analyser consists of a double image prism placed over the eye-piece of the instrument. A plate of selenite is then put upon the stage; the edges of the field will then appear coloured, while the centre remains colourless. Any object introduced into this field will exhibit the effects of polarized light with great intensity and variety of colour.

Correspondence.

THE INFLUENCE OF SEX AND LOCAL POSITION ON MORTALITY.

SIR, — Having been so obliging as to insert my former communications in your influential journal, notwithstanding they came from a correspondent without the guarantee of an address or a name, I am induced by such encouragement again to resume the pen, in order to bring before the profession some additional points illustrated by the tables contained in the Registrar-General's recent valuable Report, which appear interesting and worthy of notice.

Permit me now to observe, in continuation of the subjects discussed in my former letters, that as regards the *sex* of persons dying throughout England and Wales, more deaths have occurred among adult men in the metropolitan districts during 1844 than women, from bronchitis, pneumonia, apoplexy, paralysis, delirium tremens, and intemperance; whilst in young persons, likewise of the male sex, convulsions and hydrocephalus were most fatal. Besides these results, erysipelas, hæmorrhagy, rheumatism, diseases of the joints, ulcers, and affections of the organs of circulation, with the exception of pericarditis, proved mortal in a higher degree to men than women; which was also the case, but in even a larger ratio, in all maladies affecting the urinary organs: the deaths being, in such cases, nearly in the proportion of three men to one woman. But the greatest difference prevailed in gout, as almost four times more men than women died from that cause. Contrasted with these statements it is equally instructive, and may enable practitioners to form a more correct prognosis, when they know that a larger proportion of women than men have died from diseases of the liver, dropsy, hernia, peritonitis, enteritis, chorea, and especially cancer: as also by pertussis when attacking young persons of the female sex. Besides these results, but in a still larger proportion, as every medical man would naturally expect, many more women than men were carried off by diseases of the organs of generation, which was also observed in females from old age; whereas, deaths by accidents were much more numerous in men than women. Many other interesting facts might be quoted from the same official documents, but any further commentaries must be deferred until a future opportunity. In the meantime, however, I would beg leave to state, that apoplexy, paralysis, delirium tremens, and epilepsy, proved much more destructive maladies in London than in the provincial districts, whilst more young persons died from convulsions in the country than in the metropolis. Another feature presented by the Registrar-General's Report is also curious, and well deserves investigation, from the practical applications to which it leads; namely, that during the years 1842-3 and 4, notwithstanding the general increase in the population of this country, the aggregate number of deaths diminished consecutively in the counties of Chester, Durham, and Northumberland, as well as in the three Ridings of Yorkshire; but only partially so in the counties of Stafford and Lancaster, as all these localities are chiefly inhabited by a manufacturing population. The details now mentioned indicate, I think, greater salubrity in the districts pointed out, as well as an improved condition in that class of the people, when compared with their state in former times. Contrasted with these gratifying circumstances, which philanthropists would wish were more general, it appears that the number of deaths, during the same periods of time, have augmented in the agricultural counties of Lincoln, Huntingdon, Cambridge, Bedford, Northampton, Dorset, and Kent. These facts are important, and suggestive of much interesting speculation; indeed, I intended to have made a few observations thereon, as well also to have drawn one or two deductions; but seeing this letter has already attained perhaps too large a size for your pages, considering the many demands made upon them for other and more important matters, I must beg leave to resume the subject on another occasion, provided you can grant me a spare corner in your columns for that purpose. MEDICUS.

November 21, 1846.

ON THE LOCAL TREATMENT OF STRANGULATED HERNIA.

[THE writer of the following letter, after objecting strongly to the violent and improper use of the taxis, and of the mischief thereby done to the patient, in cases of strangulated hernia, proceeds to say:—]

The first feature strangulated hernia presents to us is a swollen intestine ex situ, painful in the extreme at the aperture, where it is evidently obstructed as to its passage inside and outside; it is also impervious at the ring, which impedes the circulation of the contents, which, being in a high degree acrimonious and pungent, irritate and distend. It is clear that the imperviousness at the aperture must be removed, so that the contents may circulate as in health. To accomplish this is the remedy, in my view, which is supported powerfully by an undeviating occurrence, namely, that a guggling noise, being a rush of flatulence, always accompanies the removal of strangulation; the bulk ceasing leaves the hernia of its usual dimensions, and free. The noise was particularly noticed by Pott, but he drew no inference from it. Had he dwelt on the point, a a rational procedure would ere this have been settled on, instead of the practice which has so long prevailed.*

In the opinion that the last points to which I have adverted furnish a clue to success, I shall describe my practice, so as to carry out my views in reference to remedying the strangulation by removal of the contents.

First, the patient is placed in a cool situation, often on the floor; wetted cloths are kept on the hernia; the cold air is admitted: this often proves successful in a short time; if not, after half an hour, the hand is applied to the sides, near the upper part, and gently pressed, to lessen the area: thus, a stream of the contents being impelled towards the aperture, are likely to enter, as the contents, being gaseous and pent up, struggle to be free. This is the only taxis I use, and it has always succeeded *when in time*, and there had been no rough handling, which latter I avoid as the sure counteractive of all means. Water and ice are said to have been tried ineffectually, but always accompanied by the usual taxis. Had I not first prepared the parts by lessening the sensibility, and, perhaps, size, by cold, the most cautious pressing might have failed. In failure of these means I expose the parts, and make a small incision near the pubis, rather internally, which allows the gut to expand; then I attempt gently to press out the contents, aware that reducing the bulk is a sine quâ non: a small incision is free from present danger, and future security follows. The sudden removal of strangulation by the application of cold was witnessed at a London hospital by Mr. Lawrence, Jun., then a student of high character. A case occurred in which the usual treatment had failed, and the operation was decided on. He suggested cold, knowing that during some years it had proved successful when early applied. The advice of a pupil, although distinguished, was unheeded, and the patient, rather undressed, was carried across the yard on a severe day to the apartment for operation. Exposure on the table showed that the rupture had vanished on being a few minutes subjected to a cold atmosphere. I recollect two cases which I could not speedily reach, but advised the messenger to pursue my plan for half an hour. On my arrival, the patient informed me that a shivering seized him, and that the wind rushed from the rupture, which at once relieved him from torture. In the course of about thirty years I treated two or three cases annually, with similar results. In one case, two surgeons attended to operate, and gave as a reason for not delaying the operation, that the part could not bear the touch. I begged to apply cold to abate the heat and sensibility for a few minutes. After about ten minutes I placed my hand on the part, which gave no pain, and, by the usual gentle pressure during about a quarter of an hour, the hernia was replaced in the presence of the operators. I was present at an operation by an experienced surgeon, whose efforts had failed to return a hernia en masse: it often slipped through his fingers. At length he raised himself on his toes, after having incised the tendon twice, and drove the inflamed intestine before him. In another case, during the operation, I interfered, and advised reduction of the size, which was declined, and the usual treatment pursued. Both cases proved fatal. Instances of the like description are recorded in which dissectoin shewed the part *impervious* where the hernia and tendon had been in contact. A case is given in the *London Medical Repository* for Nov. 25, in which the operation had been performed and the hernia returned, but followed by intense pain and death. Post-mortem examination shewed that the portion which had been fixed within the aperture during strangulation was impervious for the length of one inch and a half. Astonished at this, as were others, the operater took it to London, where distinguished surgeons were alike surprised, but remarked that the writer of this article had anticipated such an obliteration in an essay on hernia, but produced no *post-mortem fact* in proof of his statement. Strange, indeed! Surely recovery must ever prevent such a proof. They only who fail, can supply any answer to such a remark.

---

* Although Pott was well educated and highly gifted, he seemed not to exercise those discriminating powers required by his profession. Wm. Dease, of Dublin, the founder of surgery in his country, discovered this inaccuracy in his work on Wounds of the Head.

I fear that, in transmitting the details of practice from our able predecessors, inaccuracies have happened, and routine has misled many men of talent. To clear away obscurities which still invite inquiry, I apprehend that I have fallen into tedious circumlocution. Having learned that the ultimate operation has been very often fatal in France and in England lately, my great aim is to render it unnecessary. Dessault, in Paris, forbade the taxis altogether, aware of its hurtful effects and general inutility. Peter Love, who was coeval with Sharp, advised puncturing the hernia with a needle; and lately Dr. Weatherhead invented a small trocar, of which there is a plate in the Lancet about the year 1829 for the same purpose as the former, to discharge the contents externally, both being of opinion that lessening the bulk by some means was to supply the unicum remedium for strangulated hernia, except the operation. The celebrated Haller and Pott remarked that they knew not how strangulation happened. My conjecture, published in 1810, was, that the gut rushing through the very narrow space was twisted, and, when down, was doubled and closed up; thus, the return of its contents was impeded,—a sufficient cause, surely, of all the symptoms.

I am, sir, yours,
M.R.C.S.I.[*]

Brighton, Nov. 22, 1846.

VITAL STATISTICS OF MANCHESTER.

Sir,—In your abstract and illustrative notice, on the 13th inst., of the newly published Registrar-General's Report, there is much that calls for the renewed attention of the medical philosopher and economist to the ever interesting subject of mortuary statistics. It is only, however, from your accompanying remarks on that relatively high state of mortality in Manchester as compared with the extra-metropolitan districts, and the other more favourable localities in the kingdom, that I take the liberty of troubling you with a few extended observations on this important subject.

You naturally express your surprise and just sympathy on still finding, from the statistical returns, that 16,000 persons die in Manchester, in seven years, over and above the number that die in Surrey, in the same period, out of a more numerous population, as numerically set forth in your remarks; but "that 13,362 children under five years of age perish, in seven years, in Manchester above the mortality natural to mankind." There are few, or not any, but must join you in lamenting such a disproportionate and premature destruction of human life, but the first matter for consideration is, what are the causes, direct or otherwise, that occasion such an excessive mortality, and next, what are the means required to prevent or mitigate it.

You agree with many in thinking that the above number of children "fall a sacrifice to known causes, which, it is to be believed can be removed to a great extent." Several of these known causes you have mentioned, as unclean dwellings and impure streets (the streets in Manchester are acknowledged to be kept cleaner than in any other town of the kingdom), neglect of mothers, and the careless or murderous exhibition of opium and its several preparations. By many who only look at the surface of things, a great portion, if not the whole, of this relatively excessive mortality is attributed to the want of what are called proper sanatory measures, and that if sewerage were perfect, and dwellings better ventilated, with a more plentiful supply of water, that this excessive mortality would be very greatly, if not wholly, reduced to the normal rate in our rural districts. Granted that these measures be fulfilled to the fullest practicable extent, and they cannot be too far nor too much urged and instituted, yet I much fear that a corresponding reduction of this mortality would by no means follow under the present conditions of labour and social habits. From long observation and acquaintance with the working and lower classes of our population in manufacturing towns, I fear that the deteriorating causes lie much deeper, and are more engendered with the habits of the people, than either fresher air or more water will remove. The causes influencing the lamentable issue in question are more moral than physical, and a great part of the personal habits of the people, and the modes of labour, will require to be improved and altered before the desired amelioration can take place. I therefore quite agree in one of the valuable conclusions of Mr. Neison, in his work on "Vital Statistics:" "it will then appear clear that any important change to be hoped for in the value of life in town districts must be effected through other means than sanitary regulations."

---

[*] *Our correspondent, an old retired practitioner, has furnished us with his name. The printer has had the greatest difficulty in deciphering his letter, and this may account for some inaccuracies.*

Gin-palaces and spirit-vaults, low and polluting music saloons and beer-shops, are depraving health and morals, and slowly destroying life, far more than unclean dwellings, foul sewers, or a want of copious streams of water, are effectuating. Early marriages have long been laying the foundation of a premature mortality both among mothers and their offspring. For while in all England one marriage takes place to every 130 persons living, and one birth to every 31 living, in Lancashire one marriage obtains to every 115, and one birth to every 27 persons living, it is easy to infer the result in both a moral and physical view. We must also remember that many of these unions in our towns take place without the least knowledge of domestic training or economy.

One great cause operating in the production and aggravation of the evils of the last named social condition, is the hours and mode of factory labour, and especially as females are affected by them, from, we may say, the years of childhood.

The nature and economy, now, of the cotton manufacture in all its branches have tended greatly to displace adult males, and even young men from employment, and to supersede their services by women and girls, who are as well, if not better, fitted for the different species of manipulation, and for attending on machines; and moreover their labour can be obtained at a much cheaper rate than that of the ruder sex.

This general employment of females withdraws the young early from a regular education, and from domestic thrift and habits, and those riper in years, or married, from the management of their homestead, and the care and nurture of their children. These helpless creatures are generally left during the day to the care of some kind old woman, or the bought attention of some neighbour at so many pence per day. The results of these factitious and unnatural modes of living will ever tell on the amount of disease and mortality, ventilate, cleanse, and purify, as public authorities may. The primordial source of the evil was the permitting at first a female ever to labour in a factory; and though the present state of things in this respect cannot now be altered, we are not the less sensible of its injurious effects.

One evil leads to another in the chain of this social and physical degradation. Noisy, hungry, confined, or sickly infants, under the care of a feed or distracted nurse, lead to opiates and poisonous cordials, and even the hard-working and unconscientious mother will heedlessly have recourse to drugging her own child in order that she may have refreshing and undisturbed sleep during the night. Hence one addition to the frightful picture of infant mortality in our manufacturing towns and communities, which receives no legislative attention, in so far as the sale of narcotic and poisonous drugs is everywhere, and by every person, permitted, and which are sold at every corner of our streets as freely, if not more so, than water itself. It is this excessive mortality of infant life that tells upon the general average so unfavourably; for while the half of all males born alive in the North-Western District die under four years of age, in the South-Western District only one-half of the same sex die under 20 years of age, and so correspondently with the females.

The above are some of the habits and conditions of the working population that require to be altered and ameliorated before any important reduction is likely to take place in the general rate of the mortality. It is, however, interesting to consider that, notwithstanding all the excessive mortality here noticed, the population continues to increase at the rapid rate of 3 per cent. every year. Taking this rate to continue till the next decennial period, which I make no doubt it will do, the population will be augmented, in 1851, by 90,000. If we had also the means of reducing our excessive mortality to a par with the typical rate of the districts of Surrey, which would add, on the simplest calculation for ten years, 52,500, the population of Manchester and its sub-districts would amount to *442,500* souls.

The question, then, with the statesman and political economist would be, what prospect is there that trade and employment would keep pace with this increased population? If no such encouraging prospect could be laid before us, it would be a melancholy source of reflection to think that the mysterious designs of an over-ruling Providence had permitted so many of the young of our species to be carried away before the day of trial.

JAMES BLACK.

Nov. 20, 1846.

*** A very excellent statistical table of Bolton accompanied this letter, the compilation of which reflects great credit on Dr. Black.

REMARKS ON TWO OF THE CLAUSES (175 AND 176) OF THE HEALTH OF TOWNS' BILL, AND ON THE MODE IN WHICH THEY ARE LIKELY TO AFFECT THE INTERESTS OF THE MEDICAL PROFESSION.

[THE subjoined letter has been a long time in hand. We have not printed it [illegible] account of the postponement of the Health of Towns' Bill. The subject, however, has lost none of its interest, and the suggestions of our correspondent will be found worthy of consideration. The important clauses on which he comments are printed in our leading article at page 1015 of the present number.]

Sir,—The value of the 175th and 176th clauses of the Health of Towns' Bill can scarcely be over-estimated, whether in their relations to the public or our profession. Hitherto, from the agency of the Apothecaries' Act in a great measure, medical men in Great Britain have had a but too irresistible inducement to limit their study and practice to the curative, and this chiefly by way of drugs; prophylactic measures, if we except vaccination, having been miserably neglected among us. Sticklers for ventilation and the like have but too generally been regarded as mere beaters of the air. While "hygiene" has long been a hobby on the continent, it has with us been left to shift for itself; although, thanks to individual enterprise, we have, in a manner unconsciously, secured so far the benefits; as seen in the expulsion of ague, and in the comparative suppression of devastating epidemics, the former by the clearing and draining of land, and the latter by fertilizing the same with the refuse of our towns. The clauses in question, however, may not fully meet the wishes of all, and in the interval between this and the period of the introduction of the Bill, many improvements may be suggested to which the legislature that has the honour of making so great an advance in so good a direction may perhaps not be inattentive; at least we may hope so. In such an enactment vaccination surely merits notice as much as sewerage, ventilation, and whitewashing! the relations of cow-pox to small-pox being as well understood, and universally appreciated, as those of cleanliness to typhus. It has been proposed to render the accoucheur in every case responsible. Would it not be more fair to throw the onus on the natural guardians of the child, as it is invariably from their apathy, or senseless prejudice, that so important a preservative has been omitted? And surely if a small fine be imposed for neglecting to register a birth within a given time, there could be no objection. As to "salary," there is but too much reason to fear that, leaving this so perfectly undefined, the important office may be given to the lowest bidder, as we have seen done in somewhat similar cases. A liberal salary should unquestionably be given to secure the most *competent men for such onerous duties; yet its amount should in justice vary in different localities. As to the second of the two clauses (176), it is* perhaps questionable how far it would be politic to affix a stated remuneration for the forensic duties of the medical officer, and to place him so helplessly at the will of the coroner. Such duties would probably be discharged with more alacrity and efficiency, and most pleasantly, too, to all parties concerned, if the coroner and the proposed medical officer were not made to appear exactly as "master and man." Although not, perhaps, of much consequence, yet it might be better not to limit the analysis so precisely to "the *contents* of the stomach *or* intestines." Analysis of the liver or blood might be refused.—I am, sir,

Your obedient servant,

E.*

REGISTRATION OF DEATHS.

Sir,—Appreciating as much as any one the importance of an accurate registration of the causes of death, and quite alive to the difficulty in the way of remunerating the practitioner for his trouble and loss of time, I still think that the profession and legislature are both bound to the principle that a man should be paid for work done.

That a medical man is at times very much puzzled to know where to locate his cause of death in the new nosology of the Registrar-General (a nosology different to any which the student has been accustomed to, but which I have no intention to find fault with), nobody can doubt; and it is equally plain that the trouble will be in proportion to the anxiety to be correct.

I would suggest that, in the meantime, the Registrar-General should make a rule of sending to every practitioner who signs certificates of death a copy of his Annual Report. This, it is true, would be a mere acknowledgment till we could obtain something better, and it would also enable him to supply some deficiencies, or perhaps rather clear up some dark points in his present nosology, and consequently insure a more correct registration.—I am, sir,

Your obedient servant,

J. R.

Medical Intelligence.

EXPLOSIVE PROPERTIES OF GUN-COTTON.

As a caution to those who prepare Gun-cotton, we extract the following from a communication lately made to the Academy of Sciences at Paris, in Paris. MM. Lepine, Combes, and Flandin, prepared a pound of cotton for an experiment in blasting in the quarries at Issy. The cotton was as usual steeped in the acid and washed, and it was then placed near a stove for the purpose of drying it, and the room closed. In the evening they went to see if the cotton was dry, and entered the room with a lighted candle. In a second a powerful explosion took place, and two of them were thrown down, for the cotton had taken fire so soon as there was a light in contact with the surrounding air.

---

* Our correspondent has forwarded to us his name.

⁂ We have known gun-cotton to explode when brought into contact with the metal plate of a close stove not overheated. One chemist states that he found it to explode at a temperature of 170°. Probably these facts will account for the explosion described in the above paragraph, without reference to the candle, which, as we infer, was not near the cotton at the time of explosion.

CHEMICAL EQUIVALENTS OF ORGANIC SUBSTANCES.

One of the most extraordinary features of modern chemistry is the ease with which the equivalents of the most complex organic substances appear to be determined. Chemists, a few years since, would not have had the courage to assign a symbolic and equivalent constitution to an egg, including membrane and shell: because it would have been scarcely supposed correct, to include the calcium and phosphorus of the shell, in one mass of figures with the elements of the white and the yellow albumen. Yet wherein lies the difficulty? Independently of giving equivalents for blood and beefsteaks (muscle), Liebig has assigned an equivalent to bile $C^{44} H^{36} N O^{12}$ after deducting the ash: but bile is formed of Biline, Fellinic acid, Cholinic acid, Choleic acid, Taurine, &c. the difficulties connected with the analysis of which are entirely extinguished by making a sort of *omnium gatherum* equivalent! We are now likely to have equivalents for all sorts of fruits and esculent vegetables—as the apple, orange, carrot, &c.; for, according to Mulder, Liebig has determined that *turnips* exhausted by boiling have the formula $C^{26} H^{22} O^{22}$! This is indeed carrying out the atomic theory to an extent far beyond that which could have entered into the most sanguine anticipations of Dalton.

EXPENSES OF A MEDICAL EDUCATION IN SPAIN.

Before a candidate is permitted to study medicine, he must take a degree of Bachelor of Philosophy; he must have studied general chemistry, mineralogy, zoology, and botany, for at least a year, and must shew that he is acquainted with the Greek language, either before he enters his name or during his studies. Five years' study is required for the degree of Bachelor of Philosophy; and it is said that candidates commonly obtain it at the age of *fifteen* years!

	£	s.
Fees for seven years' study .	15	10
Degree of Bachelor of Medicine	4	0
Degree of Licentiate . .	30	0
Expenses incurred for the grade of Licentiate . .	49	10
Diploma of Doctor of Medicine	30	0
Fees for two years' study .	2	10
Total expense incurred for the degree of Doctor of Medicine .	£82	0

—*Orfila, in Gaz. Méd.*, Nov. 1846.

UNIVERSITY OF LONDON.

BACHELOR OF MEDICINE—SECOND EXAMINATION, 1846.

EXAMINATION FOR HONOURS.

Physiology and Comparative Anatomy.

Elam, Charles (scholarship and gold medal), Leeds School of Medicine.
Day, J. C. (gold medal), London Hospital.
Sturt, Thomas James, King's College.
Hawksley, Thomas, King's College.
Bompas, J. C., University College.

Surgery.

Elam, Charles (scholarship and gold medal), Leeds School of Medicine.
Day, J. C. (gold medal), London Hospital.

Medicine.

Elam, Charles (gold medal), Leeds School of Medicine.
Goodridge, H. F. A., University College.
Day, John C., London Hospital.
Bompas, Joseph C., University College.

Midwifery.

Elam, Charles, Leeds School of Medicine.

Structural and Physiological Botany.

Day, John C., London Hospital.

MEMOIR OF GEORGE MANN BURROWS, M.D. F.L.S., FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

George Mann Burrows was born in May 1771, at Chalk, near Gravesend, in which locality his family had resided for nearly two centuries. He had the double misfortune of losing his father when quite a child, and of being an only son of a widowed mother. His early education was obtained at the Grammar or King's School, Canterbury, from which, however, according to the custom of that period, he was removed in his 16th year, and then apprenticed to Mr. Richard Thompson, surgeon of considerable reputation and tensive practice at Rochester. In the year 1793 he came to London, and went through the regular course of studies at Guy's and St. Thomas's Hospitals, and, having been admitted a member of the College of Surgeons, and of the Society of Apothecaries, he established himself in general practice, first in Hatton Garden, and in the year 1802 removed to Bloomsbury Square, where he continued to pursue this branch of the profession up to 1815. Having been long impressed with the conviction that a large number of persons were practising medicine without having any sufficient knowledge to guide them, and without having given any proof of their capabilities, the subject of this memoir, in the year 1812, in conjunction with many other respectable practitioners, organised the Association of Surgeon-Apothecaries of England and Wales. The great object of this Association, as stated in their memorial to the College of Physicians, "was to improve the education and render more respectable their own body." The Association applied for "the parental advice" of the College of Physicians in framing a proposed legislative enactment, and invited the President and Censors of that College to form a part of a superintending body over the general practitioners; but the College authorities replied "that they could not give any advice or assistance to them on the occasion."

The assiduity, energy of character, and sound judgment, displayed by Dr. Burrows in conducting the affairs of this Association, soon obtained for him the confidence of his associates, and he was elected chairman of the Association. In this capacity he served the cause for three years with untiring zeal, much to the detriment of his private interests, and to the injury of his health. Upon the passing of the well-known "Apothecaries' Act" in 1815, the Association warmly expressed their thanks to their chairman, and begged his acceptance of 500 guineas as some compensation for the time devoted to their service. It was always a source of much regret to Dr. Burrows that the College of Physicians, "the recognised head of the medical profession," declined taking a part in the examinations appointed under the provisions of the act of 1815. When the administration of this act was confided to the Society of Apothecaries, Dr. Burrows was appointed one of the members of the First Court of Examiners of that Society. From this board, however, he very soon retired. He had the satisfaction of living long enough to witness a gratifying improvement in the attainments of the general practitioner throughout the empire, *and corresponding advances in the medical education of all classes of the profession, which might, in great measure, be fairly* attributed to the judicious regulations promulgated from time to time by the Court of Examiners appointed by the Society of Apothecaries according to the act of 1815.

In January 1814, Dr. Burrows, in conjunction with Dr. Anthony Todd Thomson and the late Mr. Royston, commenced the publication of a monthly periodical entitled "The London Medical Repository." This journal obtained an extensive circulation at home and abroad: it was a source of considerable emolument to the editors, and was the foundation of a valuable medical connexion and consultation practice to Dr. Burrows in subsequent years. This periodical was the means of diffusing among the profession in England a more perfect knowledge of the state of medical science upon the Continent of Europe, the intercourse with which had been so much restricted by the protracted war; and it was likewise the organ of the Associated Surgeon-Apothecaries of England and Wales. The principal editorial labours of this work were performed by Dr. Burrows from 1814 to 1817, when his interests in it were disposed of to considerable advantage.

Those who are familiar with the harassing and exhausting duties of a general practitioner in this metropolis,—those who know by experience how wearing is the mental effort of constantly collecting and arranging materials for a monthly periodical, and superintending such a publication through the press,—those who have thrown themselves into the vortex of any great public movement in this country, and have been called upon to perform the duties of chairman of an association which numbered 3000 members, spread all over the country, and who required to be informed by letter of all the proceedings of a central committee which held 130 public meetings in the course of three years,—those who can calculate the amount of time required to perform all those onerous and contemporaneous duties,—may form some idea of the mental and bodily exertions of Dr. Burrows during this period of his professional career. An extensive medical connexion and reputation were indeed obtained by such labours; but personal interests, domestic comforts, and bodily health, suffered in proportion.

Dr. Burrows now retired (1816) from the arduous duties of general practice, and confined himself to the treatment of insanity during the remainder of his life. He opened a small asylum for the reception of a select number of insane patients, and subsequently, in 1823, a much larger establishment, the Retreat at Clapham. In 1824, having previously graduated at St. Andrews, Dr. Burrows was admitted a Licentiate of the College of Physicians in London. From the year 1817 to 1828, Dr. Burrows concurtrated all his energies in endeavouring to improve the medical and moral treatment of the insane. In the 34th number of the London Medical Repository he inserted some "Observations on the Pathology of Insanity," exhibiting a partial development of his opinions; and he intended in that journal to have continued the results of his further investigations, but found that matter, both from domestic and foreign sources, so accumulated that he was obliged to abandon this design. He therefore proposed to publish his "Observations, Pathological, Prophylactical, and Therapeutical, on Insanity, in the form of Commentaries, with Remarks on Jurisprudence, as far as regards Mental Alienation."

Whilst engaged in the preparation of these Commentaries, he several times came before the public as a writer upon subjects relating to insanity. In 1817 he circulated a pamphlet entitled "Cursory Remarks on a Bill for Regulating Madhouses, &c. &c.," and in 1819 the above was republished as a tract entitled "Cursory Remarks on Legislative Regulation of the Insane, &c. &c." His next medical work appeared in 1820, under the title of "An Inquiry into certain Errors relative to Insanity, and their Consequences Physical, Moral, and Civil," 1 vol. 8vo.

In 1821-22, Dr. Burrows made extended tours of inspection to the various lunatic asylums in England, Scotland, and in the vicinity of Paris; and having derived much valuable information from these sources, he determined to carry the various improvements into practice, and in the following year, 1823, opened his establishment, the Retreat, at Clapham.

In 1828 Dr. Burrows brought out his long contemplated "Commentaries on the Causes, Forms, Symptoms, and Treatment, Moral and Medical, of Insanity," 1 vol. 8vo. pp. 716. This work was most favourably received by the profession in England, throughout Europe, and in America. The principal reviews of that period were unanimous in their commendations of it, pronouncing the work "a treatise of high order; in fact, the most elaborate and complete general treatise on insanity that had yet appeared in the English language."* The general public responded to this verdict, and every copy of a large impression was sold, and applications more than once made for a second edition.† The "Commentaries" were translated and published in Germany, and reprinted in America. One of the results of Dr. Burrows' extended reputation throughout the continent of Europe and America was the frequent introductions of foreign physicians to him, who were commissioned by their respective governments to inspect the hospitals for the insane in England, and especially to confer with Dr. Burrows, and to examine his private establishment. Another consequence of Dr. Burrows' literary reputation on the continent was the frequent arrival of expensive packets by the post, containing diplomas and other communications from learned and scientific bodies in different parts of Europe. A more important and legitimate result of these continued endeavours to improve the treatment of insanity was a rapid increase in consultation practice during the two succeeding years, and a simultaneous influx of private patients to the Retreat at Clapham.

In the year 1830 a serious reverse to Dr. Burrows' professional prosperity was occasioned by the unfair attacks made upon him by Mr. H. (now Lord) Brougham, who was engaged as counsel to support the sanity of Mr. Davies in a commission "de lunatico inquirendo," held upon that gentleman. Lord Brougham subsequently expressed, both verbally and in writing, his regret at the consequences which had resulted from his speech, but defended himself on the plea, that, as a "professional man," he "had no choice in the performance of a duty according to his instructions." Dr. Burrows felt his character had been so unjustly assailed, and his prospects so marred, that he was bound to offer an explanation, which he did in "A Letter to Sir H. Halford, Bart., K.C.H., &c. &c., touching some points of the evidence, and observations of counsel, on a commission of lunacy on Mr. Edward Davies." "The Times" newspaper (April 1st, 1830), in reviewing this published letter, contains the following candid avowal:—"After reading over attentively this pamphlet, we are ready to admit that Dr. Burrows has been unfairly treated, and that he has succeeded in removing the most material of the imputations cast on his character in this affair."

But, as in the human body so in the body politic, when poison has been once instilled and allowed to disseminate itself through every pore, the antidote, however powerful and appropriate, seldom repairs the mischief done, although it may save the victim from destruction. Such, unfortunately, was the case with Dr. Burrows on this occasion.

This check to professional success was confirmed by the effects resulting from an action brought against Dr. Burrows for having inadvertently, and at the request of relatives, signed an order for the personal restraint of a gentleman supposed to be insane, but who had not undergone any medical examination. Although this [illegible] of proceeding had been sanctioned by the practice of others engaged in the treatment of the insane, still the public press commented very severely upon a course of action, which, if unrestrained, might lead to serious infringements of the liberty of the subject.

---

* Edinburgh Medical and Surgical Journal.

† Dr. Burrows had revised this work, and collected much new and interesting matter for a second edition, but was deterred from further literary exertions by failing health and other circumstances.

Conscious of the integrity of his motives, however he might have erred in judgment on this particular occasion, he felt most acutely the animadversions on his conduct, but none so poignantly as the stigma which was attempted to be affixed to his name by a talented accoucheur, now no more, in an article contributed to a leading Quarterly Review.

When the Fellows of the Royal College of Physicians elected him into their body in 1839, he readily accepted the honour, not so much from any prospect of professional advantages which would accrue to him at his advanced age, but from the consolation it afforded him that the learned and liberal members of that body appreciated his incessant efforts to improve his profession and advance medical science, and that as a body of gentlemen they repudiated the unfair attacks which had been made upon his character, and which had no other foundation than a solitary error in judgment above alluded to, and which any honourable man might commit in the exercise of an arduous and difficult profession.

There remains but little more to be recorded of Dr. Burrows's professional career. He was a zealous and warm supporter of the "Society for the Relief of the Widows and Orphans of Medical Men," and was chiefly instrumental in obtaining an advantageous investment of the capital of that Society, by which its income and means of affording relief were considerably augmented. He was a Vice-President of the Society at the time of his death. In the year 1843 he disposed of his establishment, Clapham Retreat, but still continued to act as the visiting physician, as well to pursue the private practice of his profession. In the early part of his career he was a member of several medical clubs, and was fond of associating with his professional friends. His health had for several years prior to his death been much impaired by repeated and prolonged attacks of gout, which he bore with a placidity and equanimity very rare in the sufferers from that painful complaint. He spent a large portion of his leisure hours and of his time when confined by gout in the study of modern history and in the perusal of books of travels, voyages, expeditions, and everything which related to the *physical and moral condition of the least known countries of the world* and their *inhabitants. This course of reading was a favorite pursuit from boyhood,* but in latter years it was followed up with the laudable desire of collecting and arranging data which would enable the benefits of Life Insurance to be extended to his fellow-countrymen scattered all over the globe. Much valuable information, the result of these researches, was presented to the London Life Association, of which Society he was the Physician for twenty-seven years.

In person Dr. Burrows was tall and commanding, and well calculated to inspire respect in the class of patients under his care; his manners were frank and open; his temper most uniform and placid amidst all the anxieties and disappointments of an arduous and active professional career; he enjoyed the confidence and regard of a large circle of professional and private friends, and throughout life was animated by the sentiment of Seneca—"Ante senectutem curavi, ut bene viverem: in senectute, ut bene morerer: bene autem mori, est libenter mori."

Dr. Burrows was twice married; his widow, four sons, and three daughters, children of the second marriage, survive him. He was attacked with bronchitis and intermittent fever in the early part of September, and died October 29th, 1846, in the 76th year of his age. His remains were interred in Highgate Cemetery.

Selections from Journals.

SURGERY.

CONSTITUTIONAL SYPHILIS IN THE FATHER PRODUCING SYPHILIS IN THE OFFSPRING, THE MOTHER REMAINING TO ALL APPEARANCE HEALTHY.

THE question mooted in the following remarks formed the subject of an interesting discussion at the Medico-Chirurgical Society —see GAZETTE, May 23d, 1845.

Dr. Colles states it to be a well-authenticated fact, that a man, apparently cured of syphilis, and marrying a female of unblemished character, will get a child which shall be born with the venereal disease, although neither of the parents may exhibit a single trace of the disease themselves during the whole period of utero-gestation; and further, that two or three children may be born to these parents in due succession, and still the father and mother remain to all appearance untainted. An infant may come into the world with the evidences of the venereal disease fully upon it; or it may be still-born with those evidences; or it may be born apparently healthy, and at some subsequent period the symptoms of infantile syphilis may appear. When the symptoms are developed in utero, the foetus rarely

all over the body shrivelle
particularly about the anus,
coloured eruption. In this
a few days, but frequently i
few hours. In commenting
remarks, the Editor of Dr. C
(Mr. M'Coy) refers to a p
nymous writer, in the fourt
Transactions of the King an
lege of Physicians, in which
proposed,—what are the ca
of prevention, of certain cas
labour, where the child is
where the female is liable to
sive recurrences?—and to
same volume by Dr. Beatt
Dublin accoucheur, who,
practice, was able to answer
satisfactorily,—that the occu
ing to latent syphilis, and th
sition to future catastrophe
could be removed by a cour
and the almost extinct hopes
ing offspring realized. The
and Dr. Colles saw some of t
in proof of this opinion, and c
valid. Mr. M'Coy has not
nouncement of this very impo
viously to the paper by Dr. B
to above. In connection wit
of syphilis in an apparently h
Mr. M'Coy adds, that he h
which convince himself at leas
condition of the system can p
tion altogether, without actua
potency; and that if, for any
parties be subjected to a cour
conception will probably follo

POTHECARIES' HALL.

m who have obtained Certificates.

AY, Dec. 3.—William Ackland, Staple-
nerset.—William Brown, Callington,
-John Harris, Northiam, Sussex.

& DEATHS IN THE METROPOLIS

***e week ending Saturday*, Nov. 28.**

HS.	DEATHS.		*Aver. of 5 yrs.*	
. 659	Males....	480	Males....	493
. 614	Females .	464	Females .	475
1273		944		968

CAUSES OF DEATH.

ly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ES	944	1000	968
CAUSES	940	992	961
ic (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
oradic Diseases, viz.—	168		
, Cancer, &c. of uncer- seat	90	104	104
Spinal Marrow, Nerves, Senses	144	151	157
, and other Organs of piration	311	313	294
and Blood-vessels	37	29	27
ch, Liver, and other ns of Digestion	70	70	72
es of the Kidneys, &c.	17	8	7
irth, Diseases of the us, &c.	18	11	10
atism, Diseases of the es, Joints, &c.	8	6	6
Cellular Tissue, &c.	5	2	2
e	47	66	67
ce, Privation, Cold, and mperance	25	27	26

wing is a selection of the numbers of m the most important special causes:

pox	3	Convulsions	28
s	8		
ina	30	Bronchitis	56
ng-cough	33	Pneumonia	83
s	42	Phthisis	127
		Dis. of Lungs, &c.	13
y	10	Teething	4
n deaths	3	Dis. Stomach, &c.	11
		Dis. of Liver, &c.	18
cephalus	27		
exy	19	Childbirth	11
sis	16	Dis. of Uterus, &c.	6

KS.—The total number of deaths was the autumnal and 24 below the annual The deaths from typhus fever continue averages. In all the districts, except , the mortality was below the averages.

EOROLOGICAL SUMMARY.

ght of Barometer .... 29·37
, Thermometer[a] .... 45·8
tering do.[b] ...... max. 0° min. 29°
e Thames water „ 47° „ 44·8

[a] From 12 observations daily. [b] Sun.

n inches, 1·01: sum of the daily obser- ken at 9 o'clock.

ological.—*The mean temperature of was nearly 6° above the mean of the 3°).*

BOOKS RECEIVED FOR REVIEW,

***Continued from* OCT. 9.**

Underwood on the Diseases of Children, by Dr. Davies.—Quarantine and the Plague, by Gavin Milroy, M.D.—Cure of Aneurism by Compression, by the Editor of the Dublin Quarterly Journal.—Hassall's Microscopical Anatomy, Pts. 3, 4, and 5, Oct. Nov. and Dec.—Pathology and Treatment of Scrofula, by Dr. R. M. Glover—Liebig's Animal Chemistry, by Prof. Gregory, 3d edition, Pt. 1.—Ellis's Lectures and Observations on Clinical Surgery.—Medical Education. Two Lectures, by Professor W. A. Guy.—Seventh Annual Report of the Registrar-General.—Vogel's Pathological Anatomy of the Human Body, translated, with additions, by Dr. G. E. Day.—Elements of Chemistry, by T. Graham, F.R.S. &c. 2d edit. Pt. 1.—Journal of Health and Disease, Nos. 4 and 5.—Consumption, its Symptoms and Treatment, by G. Moore, M.R.C.S.L.—Dublin Quarterly Journal of Medical Science, Nov. 1846.—Müller's Archiv für Anatomie, Physiologie, &c. No. 6, 1845.—Physical Signs and Diagnosis of Diseases of the Lungs, by James Turnbull, M.D.—Manual of Materia Medica, by J. F. Royle, M.D. Professor in King's College.—A Reply to the Review of Dr. Drummond's First Steps to Anatomy.—Practical Remarks on Near Sight, Aged Sight, and Impaired Vision, by W. W. Cooper, F.R.C.S.L.—Principles of Human Physiology, by W. B. Carpenter, M.D. 3d edition.—Dr. J. S. Bushman's Observations on Hydropathy.—The Scientific Phenomena of Domestic Life, by C. F. Gower.—Liebig's Question to Mulder tested by Morality and Science, by Dr. G. T. Mulder, translated by Dr. P. Fromberg.—A System of Surgery, by J. F. Chelius, Part 14.—Gatherings from Graveyards.—Burial Ground Incendiarism.—Lectures on Metropolitan Graveyards, by G. A. Walker, Surgeon.—The Salt Monopoly stated.—Fiftieth Report of the Friends' Retreat near York.—Life of George Cheyne, M.D. with Extracts, &c.

NOTICES TO CORRESPONDENTS.

Mr. W. H. Bainbrigge.—The three cases shall be inserted as early as our arrangements with other correspondents will permit.

We are obliged to Mr. Brenchley for his letter on the Berkshire fever. We will, if possible, find room for it next week.

Mr. J. Snell's paper on Injuries of the Head has been received.

"A Yearly Subscriber" is requested to return the defective Nos. to our printers, who will send back perfect ones in exchange.—The errors complained of were only in a few impressions, having been discovered in the course of publication.

CORRIGENDA.—In our last number, in reference to Dr. R. C. Golding's report of a case of Gangrene of the Lung, p. 966, l. 43, for "fluid," read "florid."—Line 77, for "palpitation," read "palpation."—L. 102, for "some," read "same."—L. 120, for "other," read "lower."

—— Also, in the report of Royal Med. and Chir. Soc. *for* (what Mr. Curling is stated to have said) "but looking on castration as it really was—a simple operation,—no death that he (Mr. C.) knew having ever occurred from it," *read* "no case of death from castration had come under my own observation in hospital or private practice I am well aware that the operation has occasionally been followed by fatal consequences, and I have alluded to some unfortunate cases in my work on Diseases of the Testis; but I believe castration to be less dangerous than is commonly supposed."—T. B. C.

—— Page 956, l. 28, for "sig." read "sing."

with information brought dov
period, and of a very practic
that it is conveyed in an agree
ing manner. It is difficult to
part of the volume as more de
than another, for all are ably do
EDIN. MED. AND

London: John Churchill, Prin

Just published, 2d Edition, in
8vo. price 21s. cloth le

A PRACTICAL TR
the DISEASES PECULI
illustrated by Cases derived fr
Private Practice. By SAMUEL
late Obstetric Physician and L
Hospital.

London: Samuel Highley, 32

UNIVERSITY C
LONDON.—ASSISTANT-
the HOSPITAL; ASSISTANT
the Hospital.—The Council h
appoint TWO ASSISTANT-PH
ONE ADDITIONAL ASSIST
to the University College Hospi
are requested to send in their
Testimonials on or before Mon
ber. The Council desire that i
stood that the holding either
not constitute any claim to pref
occasions of appointments in
College.

CHARLES C
December 7, 1846. *Secreta*

PRIVATE LUNATIC
Wigston Magna, near Leic
prietor, Mr. Blunt, Surgeon, ne
Mr. John Blunt, by whom this A
blished nearly forty years since,
forms his friends and the pub
vacancies for a few respectable
The situation is pleasant and
the grounds for recreation diver

—Vol. XXXVIII.
eries, No. 86.]

Price {Unstamped, 8d.
Stamped.... 9d.

LONDON
DICAL GAZETTE
OR
Journal of Practical Medicine.

7}
s.}

December 18, 1846.

{Also in
Monthly Parts.

LECTURES.

Page
ecture on Atmospheric Changes
ises of Disease, delivered at
rk Medical School, by Thomas
, M.D. Physician to the York
ary, and Lecturer on the Theory
ctice of Medicine 1043

INAL COMMUNICATIONS.

angulation of the Ileum in an
e of the Mesentery. By John
M.D. With Engraving 1049
plementary Spleen causing Death,
he Patient being placed in the
Position, in consequence of a
ed Thigh. By W. H. Bainbrigge,
R.C.S. Surgeon to the Northern
l, Liverpool....................1052
ch Epidemic Fever of 1843-4. By
l Wardell, M.D. Ed. late Presi-
the Royal Physical and Hunterian
l Societies, Edinburgh, &c. &c.
..............................1053
ithotrity in the Female. By
. Warren, M.D. Professor of
y and Operative Surgery in
d University, Boston 1058

LEADING ARTICLES.

State of the Office of Coroner—
tions for its Improvement 1062

REVIEWS.

logical Anatomy of the Human
By Julius Vogel, M.D. Trans-
om the German, by Dr. George E.
..............................1065
on, its Symptoms and Treatment.
orge Moore, M.R.C.S.L. 1067
he Epidemic Cholera. By R. H.
dy, M.D. late Physician-General,
resident of the Medical Board,
y 1068
iologically considered. By David
nell Reed, Licentiate of Medicine,
ly Physician to the Seaman's Hos-
t Port au Prince 1068
the Body in relation to the Mind.
orge Moore, M.D................1070

OCEEDINGS OF SOCIETIES.

dical and Chirurgical Society.—
f Disease and Stricture of the In-
m Ileum. By John Allan, Sur-
R.N............................1072

Page
Case of fatal internal Strangulation, caused by a Cord prolonged from a Diverticulum of the Ileum: with Observations. By T. B. Curling, Lecturer on Surgery at the London Hospital, &c. 1072
Pathological Society of London.—Premature Occlusion of the Foramen Ovale—Diseased Mitral Valve—Contracted left Heart—Large Pulmonary Artery and Duct 1076
Malformation of the Heart 1077
Two Specimens of Diseased Heart........1078
An Infant's Heart possessing only One Auricle and One Ventricle 1078
The Pelvis of an Old Woman 1079
A very much enlarged and thickened Bursa 1079
Preparation taken from a Man, aged 57, who cut his Throat with a Razor........1079
Kidney affected with Tubercles 1079
Stricture of the Rectum..................1079
Filaria Medinensis 1079
Westminster Medical Society.—Dr. William Merriman on Inversion of the Uterus ..1080

CORRESPONDENCE.

The Influence of Age on Mortality, as well in the Metropolitan as the Rural Population 1082
On the Typhus Fever in Berkshire. By Horatio Coare Brenchley, of Aston 1082
A Secundum Artem Prescription 1084

SELECTIONS FROM JOURNALS, ETC.

On the Blood Corpuscles of the Human Embryo. By Kœlliker................1084
Composition of a Salivary Calculus taken from a Horse. By J. L. Lassaigne 1085

MEDICAL INTELLIGENCE.

Medical Appointment.......................1048
Malaria from Rice Plantations 1048
Animal Magnetism superseded—Discovery of a New Hypnopoietic 1085
Royal College of Surgeons.—List of Gentlemen elected Fellows 1086
Gentlemen admitted Members 1086
Apothecaries' Hall.—Gentlemen who have obtained Certificates 1086

WEEKLY TABLES, ETC.

Births and Deaths in the Metropolis........1083
Meteorological Summary 1086
Notices to Correspondents 1086

[For Advertisements, see next page.

Uterus.
V. Ormerod's Clinical Coll
VI. Recueil de Mémoires d
VII. Guy's Hospital Reports
VIII. Dr. Underwood on Dise
et sur la Manière d'E
IX. Dr. Glover on the Path
X. Liebig's Animal Chemi
XI. Dr. Marshall Hall's Ob
XII. Report of the Registrar
XIII. Professor Marx's Moral
XIV. Cooper on Near Sight,
Eye.—Annales d'Ocul
XV. Wilson on the Diseases
XVI. Medico-Chirurgical Tra
XVII. Royle's Manual of Mat
NOTICES OF—Hassall's
Hand-Book of Anato
Mulder's Reply to Lie
demic Cholera.—Sme
pathy.—Turnbull on
Selections from Foreign

London: S. Highley,

DISEASES OF THE

Fcp. 8vo. 6s. 6d. c

THE PHYSICAL DI
DISEASES of the LUN
WALSHE, M.D. Professor of
in University College, Physici
College Hospital, and to the
sumption and Diseases of the

"Few manuals of more sterli
have for a long time past issued
press than the admirable and
now before us."—*Cormack's Jo*

"The student will here find
connected with the physical
lungs lucidly described, and a
to the healthy or morbid condit
indicative."—*Medical Gazette.*

"The merit of the book is of
and the remarks, which are

Lectures.

ICAL LECTURE ON

RIC CHANGES AS
:S OF DISEASE.

vember 19th, at the York
edical School,

AS LAYCOCK, M.D.
'ork Dispensary, and Lecturer
' and Practice of Medicine.

pheric changes—an astro-
tion verified—seasonal dis-
of temperature on diarrhœal
termittent neuralgiæ, hypo-
and chlorosis, in autumn—
rological hours in connexion
sms of intermittents—and
!h—effects of cold on the
rgans—of the periodic shoot-
ι the respiratory organs and
ystem—amount of rain—its
ummer epidemics—fallacies
ʀ the effect of atmospheric
national registration—sug-
vements.—PROLEPTICS.

ıore common subject of con-
ɜen lay persons and their
, than the weather, and its
alth, and you will often hear
ured as to its healthiness and
but I believe there is a great
ıformation and theory preva-
ds of many practitioners. It
y that I took up a newly
me, and found the author
late epidemic diarrhœa on
ılternate chills and heats of
days, he said, were very hot,
chilly. I think I may posi-
ıat the writer of that book
ɜd at the thermometer on any
ng the prevalence of the epi-
ıpared the temperature with
:e of other yers. If he had
would have found that the
armer, on the average, than
previous summers. Observa-
kind I am alluding to add
lical science.

ı, changes in temperature have
: influence on the health of
ılways directly. The problem
siderable complexity, because
temperature are complicated
nges in the atmosphere, and
ıce of the magnetism of the
ıe electricity of the air. These
; to meteorology, and I really
er service could be done to
re and science than the publication of a simple practical treatise on *medical* meterology.

By the revolution of this earth of ours on its axis, we are alternately turned to and from the sun, and removed from the action of its light and heat, to be restored again in a never-ending cycle; but while the earth is revolving on its axis, it is circling round the sun, and thus developing the important vicissitudes of the seasons. Further, another mass of matter influences the earth, but in some sort inversely, for to it the earth is as a sun: this is the moon, to which so much pathological influence has been attributed from time immemorial. The question whether distant planets—the sister orbs of the solar system—exercise any disturbing power on the earth, its atmosphere, its waters, or on the beings swarming upon its surface, has not been investigated by modern science. Ancient astrology maintained that they did; modern astrology (or rather astronomy) scoffs at the notion. There are yet some mystic and enthusiastic spirits who hold to the ancient doctrines, and who will state to you some authentic and very startling facts in support of them. I was once surprised into some respect for these doctrines myself: I had writ something not exactly scornfully regarding them, but with a strong reference to the indubitable quackeries of pretended astrologers; of men, who, not content with predicting planetary movements, profess to have a power of ruling the stars; as if those mighty orbs circling through space with inconceivable force and velocity, and urged on their course by the WILL of an omnipotent Creator, could be turned from that course or in any way influenced by finite man. All men who profess to have the power of doing this are quacks, and guilty of quackery. Now three years ago (on the 17th of September, 1843) I received an anonymous letter from Scarborough, very civilly reproving me for applying the term quackery to the writer's favourite subject. I will read to you an extract:—"Before I conclude, I will just make one prediction, in order that you may see that astrology is not quackery. On the 17th day of October in this year the planets Saturn and Mars will be in conjunction, and both in square to Venus. Now these aspects were never known to occur without producing a dreadful storm of wind and rain. . . . Expect, then, on the 17th October next, a *severe storm*, which will cause great floods," &c. Now I went to bed on the 16th of October, in common with all persons who trouble themselves little about the weather, or who were not in the secret of the conjunction, without any expectation of a change in the weather. The night was perfectly fine, and any odds, to use a sporting phrase, would have been laid against the verification of the astrologer's prediction:

yet it was verified to the letter. There was on the next day a heavy storm of wind and rain, and, what was more curious, although only the middle of October, snow fell fast and in very large flakes early in the morning for an hour or two. Of course I had on the same evening another letter, dated Scarbro', referring to the exact verification of the prediction made a month before on astrological principles: whether the agreement was accidental or not must be decided by more astronomically learned persons than myself. It must be remembered that it could have been predicted a thousand years before as well as a month; and, as a new planet has lately been discovered by its disturbing influence on another planet, its nearest neighbour, I do not see anything absurd in the notion that our neighbours may disturb us, especially when they conjoin their forces and get into square.

There is another curious source of atmospheric disturbance that I ought to mention, without referring to the equinoxes, &c. more specially, and that is, the stream or streams of asteroids which are supposed to circulate round the sun and in one neighbourhood, and which, flashing through our atmosphere at certain periods, gives rise to the phenomena of shooting-stars. To these I will refer, however, again.

Now can we expect beforehand what morbid changes will take place in men's bodies from a consideration of the various atmospheric changes? Are there, for example, diseases which have a season of recurrence appropriate to themselves, just as certain planets or animals? It is well known that there are, and has been well known for many centuries. Hippocrates has left on record a summary of the several diseases, and you will find it quite applicable to the latitude and longitude of York. In spring, he says, nervous diseases are frequent —diseases of the nervous system, together with thoracic and pulmonary affections; in summer, continued, intermittent, and remittent fever, and diarrhœa; in autumn, the fevers of summer, diarrhœa, and dysentery; hepatic diseases, and their sequelæ; diseases of the nervous system: in winter, thoracic affections. During the past summer (which has been remarkable for its tropical character) diarrhœa has been very fatal, and has added largely to the mortality of many towns. The last quarterly return of the Registrar-General shews a most remarkable increase of mortality from this cause. In some towns the number of deaths has been doubled. There can be little doubt but that the extreme heat, acting upon the organic remains in the ditches, sewers, and drains, has caused a greater evolution of malaria and miasma during this summer than several preceding, and that the increased mortality is due to this increased chemical decomp tion of the organic debris of our towns. pointed out the relations of this question you during the summer, and therefore not repeat my views. Here, however, a series of diagrams exhibiting the cur of temperature and of mortality from di rhoea and cholera in the metropolis duri the four years from 1842 inclusive. Y may see there most plainly how the dea line follows on the rise and fall of the te perature, the deaths increasing or diminis ing just as the temperature. I have doubt that a diagram of deaths from fev would exhibit similar results.

Now it is very interesting to observe th the fall or rise of temperature is not follow by an *immediate* diminution or increase i the number of deaths: the effects are felt i ten days or a fortnight, or even more, afterwards. It is curious to observe, too, how the temperature (and of course the number of deaths) alternately increases and diminishes; resembling the flowing or ebbing tide of the ocean: which as it rises to the maximum rises higher at every bound than the highest point previously attained, and then, when the maximum is attained, falling in the same way.

During the autumn we have had neuralgia in greater number,—greater, I mean, than in the summer. We have had gastrodynia with hypochondriasis and with chlorosis. Chlorosis has been singularly frequent; what is the reason? Is it that the spleen has suffered during the uncommonly hot summer, or that the nutritive functions have been less active? Besides epigastric and upochondric neuralgia, we have had several cases of quotidian intermittent, tic douloureux, or brow ague. In one case the ramifications of the upper cervical nerves were traced out by the patient; in another the pain was limited to the infra-orbital branch of the fifth. In other cases the paroxysms were accompanied by violent cephalæa; and in one patient, a delicate female, the paroxysm was like that of a slight ague fit, with irritation of the stomach, vomiting, and faintness.

Now, what is remarkable in these cases is this: the greater proportion of them—indeed, all, I think, without an exception—began or ended about the same hour of the day. There were two paroxysmal hours in the mason who had been working on the low grounds towards Malton, and who had suffered for two or three weeks: the paroxysms began regularly at four o'clock, P.M., and continued until four o'clock, A.M. He then got ease, and went to sleep. And this was the case with several others. But the man with neuralgia of the supra- nerve began to suffer at eight o'clock, A.M., and the paroxysm

ntil eight or nine o'clock, P.M. Of course
ere is a reason why these hours are selected
r the commencement and termination of
e paroxysm : what, then, can it be ?

In the first place, we find that the atmos-
heric tides attain their maximum and
inimum at certain hours of the day: for
ere are tides in the circumambient atmos-
here, as well as in the circumambient
ean ; and therewith there are also changes
the electricity of the air and the mag-
etism of the earth. From 8 to 10 o'clock,
.M. and P.M. the barometer is at its
aximum height; the electric tension is at
maximum too; and there is also the
eatest maximum variation east of the
agnetic needle at the same hours. From
ur to five o'clock, A.M. and P.M. the
rometer is at its minimum, and so is also
e electric tension. It ought to be borne
mind that there are other diseases which
ve a relation to these meteoric hours, but
incipally those of the nervous system, as
anity; or those whose onset is dependent
pon some predisposing condition of the
ervous system, as cholera. The respira-
ory movements, and of course the activity
f the circulation, is in connexion also with
ese hours. About four or five o'clock in
e morning, with a minimum temperature,
minimum electric tension, and a minimum
ight of the barometer, there is also a
imum consumption of oxygen. Further,
ave ascertained by frequent inquiry that
p generally comes on about that hour
r a feverish restless night; and, what is
re remarkable, the statistics of deaths in
rk show that the chances are in the
portion of three to two; that the last
p—the sleep of death—will occur at that
r. Now, all these coincidences cannot
accidental; and as the operation of
ral laws is as unerring as that of the
t exquisite machinery, due investigation
inquiry only are requisite to lay bare
whole mystery.

e are already beginning to have an
ease of pulmonary affections; weakly
ren and old asthmatic people are be-
ing to drop like summer plants after a
ty autumnal night, or rather like the
e feeble portions of the respiratory
em of plants—the tender leaves—which
er and drop first at the fall of the leaf.

> "The autumn winds rushing
> Waft the leaves that are searest."

ature's laws are singularly uniform : the
e cause which impairs or destroys the
piratory organs of trees and shrubs, and
ch takes the most fragile first, nips also
respiratory organs of men and women,
ing first upon the most delicate and most
der. I have drawn *out diagrams of the*
ths from diseases of the respiratory organs in the metropolis during two years, just like those exhibiting the deaths from diarrhœa and dysentery; but I have reversed the thermometer, and thus the curve of increasing or diminishing cold is shown in its relation to the curve of increasing or diminishing mortality from diseases of the respiratory organs. And as in the other, the heat diagrams, so in these, the diagrams of cold, you see the curve of mortality doggedly following at the distance of from a week to a fortnight the curve of cold,—rising and falling as it rises and falls.

But there is a peculiarity in the curves. Here and there we observe the deaths shooting high above or falling below the ordinary wave; just as you may see (when the tide is flowing) some curved breaker dash up far higher or retreating lower than the rest. Of course there is a reason for this; and I have been inclined to look for it, *partly* at least, in the atmospheric disturbances which accompany or follow the meteors termed falling stars. There are two periods of the year at which these are noticed to return with great regularity, namely, the second week in August and the second week in November. A German astronomer named Ermann advocates the hypothesis that the phenomena are really due to two annular streams of asteroids which we meet with in the elliptic as they swell round the sun, and he has computed that we must every year come into conjunction with these streams, or, in other words, they will interpose between us and the sun: with that of August from the 5th to the 11th of February, and that of November from the 10th to the 13th of May. Now, as anything interposing between us and the sun's rays intercepts those rays, and makes a difference in the temperature,—as a cloud, or a mountain,—so a cloud of little starlike bodies sweeping along through space will doubtless have the same effect if in a similarly relative position. Mr. Ermann has compared various tables of meteorological observations, and he says that effect does actually result; that the sun has less lighting or heating power during the periods I have mentioned as the periods when these streams of asteroids will get between us and the sun. I may add, that the celebrated Humboldt has also given these views currency in his work entitled "Kosmos." (Vol. 1.)

Well, now, let us look at our diagrams, and in doing this we must make a liberal allowance of time: all weather prophets claim this wide margin. Here are two exhibiting the line of mortality from diseases of the respiratory organs, and the two of cold, for 1844-5, and 1845-6; in each the year commences a week before the autumnal equinox. In the week ending October 26th, pulmonary diseases number 510!

Let us now follow these asteroids of November to the other side of the earth, when they come between us and the sun, from the 10th to the 13th of May. From the week ending April 12th, 1845, we find there is a gradual increase of temperature, such as might be expected, until the week ending the 2d of May, when the lowest mean temperature was 42·2°; but during the next week it falls to 35°, and for three weeks following it is under 40°. The line of mortality curves parallel to the line of cold at the usual distance, the deaths increasing from 227 on the 24th, to 290 on the 31st of May. Of course those persons dying during the latter week received their deathblow, not during the week in which they died or were registered, but during the increased cold of the 10th of May.

The asteroids of August, according to Ermann, came into conjunction with the earth from the 5th to the 11th of February. During the week ending the 18th of Jan. 1845, the mean lowest temperature was 34°. From this point the cold gradually increased, until, in the week ending February 15th, it is marked 8·8°! Now this is a great degree of cold. The effects are seen in the line of mortality; the deaths rise from 303, during the weeks ending February 1st, to 334, 368, and at last 408, during the week ending February 22d; but doubtless several *registered* in this week *died* in the week before.

week ending April
week ending May
the meteor week,
deaths from pulmo
concurrently with
16th of May they
23d and 30th the
279.

The line of mor
paralysis follows th
its rising and fallin
that of pulmonary
Feb. 1845, the de
preceding week w
temperature of th
24th, was 34°, but
the 22d of Feb.
increase of 33·3 p
ingly the temperat
in the week previo
before that (endin
fact, on Feb. 13th
low as 4 degrees b
be shown, without
night many were s
learn the general
about that time.
gous facts showing
pulmonary and ce

The only differ
that while the min
former occurs
months, there is a
that time. Thus,
August 8th, 1846

The cause, whatever it be, has not an absolutely exact period of recurrence, as in the preceding years the decrements appear to have been somewhat later, that is to say, nearer the equinox and solstice.

The quantity of rain which falls has an important bearing on the health. I have not, however, as yet explored statistically the relations of the hygrometric condition of either the atmosphere or the earth. I cannot help, however, pointing out to you the vast advantage which accrued to the inhabitants of London during the August meteor week of this year, especially that ending the 8th. During the first three weeks of June no rain fell, or only 0·04 of an inch, and during the last week of that month, and the succeeding month of July, there was no continued rain; only 2¼ inches fell, with a high temperature during the whole six weeks. The consequence was, that the sewers were not washed, and diarrhœa was epidemic. But on August 5th, a heavy storm burst over the metropolis, above 2 inches of rain fell, and luckily for that vast population there collected, the accumulated *debris* of themselves and their domestic animals were swept from the sewers by mighty torrents of water. The results were instantaneous. The deaths from diarrhœa immediately became fewer, and the line of mortality continually descended without a check until the week ending October 10th, when there was a slight increase.

Now, on looking at the diagrams for the four previous years, we find that the second meteor week of August 1842 was the culminating point of epidemic diarrhœa, &c. and of temperature; both fell from the week ending Aug. 20, the mortality being 107; and this summer, though less tropical as to heat, closely resembled the last in the amount of rain during the summer months of May, June, July, and August. In 1843 matters were different; much rain fell during May, June, and July, and cleansed the sewers, while the temperature was much lower. The result was, that the highest number of deaths from diarrhœa, cholera, &c. during the week ending August 12th, was only 35, against 240 in the week ending August 8th, 1846. But September 1843 was a hot and dry month, with less than 7-10ths of an inch of rain, and then the mortality rose to 98 during the week ending September 23d. During the last week of June, and the first week of July, 1844, nearly three inches of rain fell, and although the subsequent weeks were hot, with little rain, the mortality reached no higher maximum than 71 during the week ending August 10th, from which time (being checked by *the meteoric changes of that period) it gradually declined. The weather was occasionally very hot in* June and July 1845, but the mean temperature was low, and there was abundance of rain—nearly five inches in the two months; consequently the mortality from diarrhœa was low, and never attained a higher point than 50 during the meteoric week ending August 9th, from whence it immediately fell. The latter weeks of August and the beginning of September were hot, with little rain, and the mortality thereupon attained another maximum, during the week ending Septemper 27th, of 51, and thence it finally descended to the winter level.

How strikingly do these facts point to the true source of cholera—diarrhœa, and their sister-scourge, continued fever! If a heavy rain falls in the summer months, and cleanses the sewers of London—those wide branching recipients of myriads of water-closets—the three-headed hydra slumbers; but let the sun beat upon that wilderness of streets in the month of June—streets teeming with an *immigrant* (as well as their own) population, to be counted by tens of thousands, and seething beneath their surface with the hourly excreta of that vast mass of human beings—without one cleansing shower, and the result is as I have demonstrated. How many lives, then, would a regular flushing of the sewers during last summer have saved, and how much suffering, not to London only, but to the other towns!

Amongst the effects of atmospheric changes (which may be either direct in their operation, or indirect, as, where we have excessive heat indirectly causing disease by the evolution of miasmata, or directly causing apoplexy), there may be indirect effects in this way. A low mortality in summer and autumn may be followed by a high mortality in winter, or vice versâ. Persons who escape death from diarrhœa only live on for a while longer to die of pulmonary disease during the first fit of severe weather. Or persons may have had an attack of epidemic diarrhœa during such a summer as that just passed, may have been thereby debilitated, or predisposed to pulmonary disease, and they, again, may swell the mortality a week or two after the first cold weather. In short, the number of persons in a population moriable, to coin a phrase, or likely to die—immediately predisposed to death, as it were, will very much determine the number of persons dying directly or indirectly from any atmospheric vicissitude or miasm. The cholera carried off before their time a number of persons already doomed to die within the year, and thus the subsequent year appeared as if it were healthier; but a less mortality following an increased mortality from an epidemic proves no increased healthiness in the circumstances of the population; it only proves that there is a population better able to resist unhealthy or injurious circumstances because the weak have been weeded out by the epidemic. It is therefore clear that what causes debility is as important as that which causes death. I think that in those towns in which the epidemic diarrhœa has added so seriously to the mortality, the rate of mortality will be much less during at least the spring quarter of 1847, if not during the current autumn and next winter quarter. If that be so, it will be no proof of improvement in the hygienic condition of our large towns, although it will doubtless be quoted as such.

If the weather to come be at all like that of the last two years, we shall have an increase of deaths from pulmonary diseases up to Christmas; then a gradual diminution to the end of January; from thence the rate of mortality from these affections will increase, and will receive an impulse from the cold weather to be expected about the second week of February, and attain its maximum at the end of that month, or the beginning of the next. After that there will be a decline, and another increase in the week following the equinox. We can have no certainty, however, as I remarked before, respecting at least the equinoctial and solstitial maximi. Every year has its proper genius epidemicus, and this perhaps recurs in a regular cycle, possibly every seventeen years, as has been thought: but the cycle is not yet determined; we are only certain that there *is* one.

I trust you will return the cause of death to the public registrar as accurately as you possibly can, when, at a future time, that responsible duty shall devolve upon you. I think it will give you the habit of correct diagnosis, and thereby serve you materially; but I might add, that the registration of the causes of death accurately is of vital importance to the progress of medical science. I cannot sufficiently express of how great importance and value our national vital statistics will probably be. I know there is much fallacy in them at present, but the fault rests principally with the profession and the public; the Registrar-General, I believe, spares no pains. With reference to the metropolitan weekly tables issued from his Office (and from which I have drawn the preceding illustrations), I may say that when we look at the important meteorological data which they place in juxta-position with the causes of death, and other particulars, and thus place accurate observations at the command of the profession, which would cost it a large annual expenditure to obtain, we are bound to render that Office all the assistance in our power. And when we consider that these data are so readily accessible, and so *handy*, it cannot be doubted but that inquiring minds will turn to them from time to time, and, as year is added to year, finally deduce most important general facts and principles, and such as the practitioner can rely on, and on which a true *medical almanac* can be constructed. It is earnestly to be wished that these weekly tables were not confined to the metropolis, but were made general throughout the whole country. We should then have a perfect record of the meteorological and pathological movement of the large and varied populations comprised in England and Wales. If the *hour* of birth and death were registered as well as the *day*, it would enable us to investigate the relations to disease of those diurnal barometric, electric, and other changes of which we know so little, and of which we *must* know more before medical meteorology can be established on a perfectly sound basis. From some experience in York, I have no doubt whatever that the requisite information would be rarely withheld, as it is an established custom amongst *all* classes, without, I believe, an exception, to note the hour of birth and the hour of departure. It would also render the table more valuable for scientific purposes if the returns were made out of the deaths that *occurred* during the week, and not of the deaths *registered*. Whether this modification be practicable or not I cannot say, but I am sure such a modification would add very much indeed to the scientific value of the tables, because we could then determine *accurately* the period of time that elapses between the hour and day of greatest cold or heat, or of the occurrence of a thunder-storm, an earthquake, or of the appearance of a meteor, &c. and the hour or day of death. We should thus be able to deduce general principles more certainly than we can at present, if it be, as I suppose, that a death is generally registered from one to six days after its occurrence, and establish the science of PROLEPTICS, or of predicting events, on sound foundation.

MEDICAL APPOINTMENT.

DR. RICHARD QUAIN has been appointed one of the Physicians to the St. George's and St. James's Dispensary.

MALARIA FROM RICE PLANTATIONS.

THE Duke of Lucca having taken into consideration the representations made to him by many of his subjects, to the effect that since the introduction of the cultivation of rice into the state of Lucca, malaria has become very prevalent in the marshy districts devoted to that object, has ordered that the cultivation of rice be immediately discontinued; and that it be for the future prohibited in his dominions.

Original Communications.

CASE OF

RANGULATION OF THE ILEUM IN AN APERTURE OF THE MESENTERY.

By John Snow, M.D.*

E subject of the following case was patient of Mr. Marshall of Greek eet, and I am indebted to him for the owing account of her illness, hav- seen her during life myself only at last visit.

Mrs. Oliver, 24 years of age, of good stitution, in the 8th month of her t pregnancy, was seized early on urday morning, March 21st, 1846, h rather severe pain, extending over whole of the belly, of an inter- ting character, being increased at ervals varying from a quarter of an r to half an hour. There were ness and vomiting, but little or no derness on pressure of the abdo- n. The pulse was about 80 : the vels had been moved by castor oil. e thought her labour was coming but the os uteri was not at all di- ed. Supposing that the pain de- ided on irregular spasmodic action the intestines, a grain and a half of um, and a carminative mixture, were ninistered. In the evening the pain l somewhat abated, and the vomit- had nearly ceased.

2d.—She had slept very little dur- the night; the pain was as severe on the previous morning, with rter intervals of intermission, and vomiting had returned. Opiates re continued at intervals, and effer- cing and cathartic draughts. In evening the breathing was accele- ed, and the pulse was upwards of): there was slight distension of the wels from flatulence. An enema s administered, and was followed by at the nurse considered to be a ious and healthy motion, but it was seen by me. She now complained thirst.

23d.—She had passed another rest- s night. The pulse was now 120, l full; the breathing extremely hurried, and the thirst very great. The countenance was anxious. Sixteen ounces of blood were abstracted from the arm, to the great relief of the dyspnœa; the pulse became small and weak, but was not diminished in frequency. To take calomel and opium, and effervescing draughts. The clyster was repeated, but no fæcal evacuation followed.

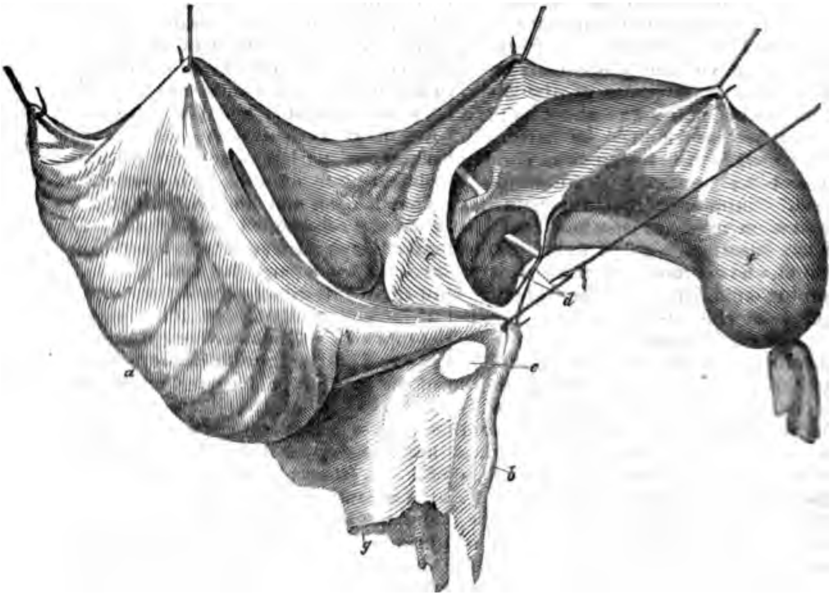
24th.—The vomiting continued, and during the night a considerable quantity of dark green liquid was brought up; not, however, having a fæcal odour. There was a little tenderness on firm pressure, and great tympanitic swelling of the abdomen. The countenance was somewhat improved since yesterday, but the pulse was very rapid—140. A repetition of the clyster, and a continuance of the calomel and opium, and the fomentations which had been employed throughout, were directed. She died four hours after this visit, on the 4th day of her illness.

Examination 24 hours after death.—The abdomen was tympanitic and very much swollen, and a great quantity of dark green liquid, similar to that which had been vomited, had flowed from the mouth after death. As soon as the abdominal parietes were cut through, several pints of red serum flowed out. The stomach and small intestines were extremely distended with flatus; the only lymph observed was a little of a creamy consistence between two folds of small intestine in the centre of the abdomen; this part of the intestine exhibited a reddish surface externally: the rest of the intestines were nearly of the natural pale colour, except the last portion of the ileum, about 18 inches of which were of a deep purple, approaching nearly to black, and lay in folds in front and to the right side of the ascending colon. The contents of the uterus being removed in order to bring this part more clearly into view, these folds of ileum were seen to be bound down just in front of the junction of the cæcum with the colon, and constricted as closely as if a thread had been twitched tightly round them. The band which held them down did not seem thicker than the smallest hempen twine; one end of it was continuous with the peritoneum covering the vermiform appendix at about three-fourths of an inch from its commencement, and the other with

---

Read at the Royal Med. and Chir. Society, e 23d, 1846.

the peritoneum covering the ileum, about an inch from its termination. The appendix vermiformis was doubled on itself at the junction of this band, and the process of peritoneum inclosing it was dragged upwards, so as to give the appearance of a tight ligament, extending from that point to the upper edge of the pelvis, in front of the right sacro-iliac symphysis. On Mr. Marshall's attempting to pass his finger under the band, it gave way, and liberated the strangulated ileum, but the parts still remained in an unnatural position; the ascending colon was twisted on itself, so that the cœcum was turned with its inner edge outwards, the ileum entering on the outer side, and the origin of the vermiform appendix being on the anterior and external side; these intestines, however, were readily removed into their natural places. The coats of the dark-coloured portion of ileum which had been strangulated were much swollen from the great congestion. The stomach was pale externally; its mucous membrane was ashy brown, and gave way under the fingers. This viscus, and the duodenum, contained dark green fluid, and the jejunum and the ileum, down to the strictured portion, contained a good deal of yellow liquid fæces; the colon was empty. The head of the fœtus was closely fitted to the cavity of the pelvis, and the os uteri was dilated to the size of a half-penny, the membranes being unruptured.



a, Cæcum. *b*, Vermiform appendix included in a fold of mesentery. *c*, An aperture in this fold. *d*, Band of mesentery which caused the strangulation. *e*, A fold of peritoneum behind which is a pouch. *f*, Ileum. *g*, The part of the abnormal mesentery which was attached near the right sacro-iliac synchondrosis.

On examining the preparation* which accompanies this paper, it will be found that the vermiform appendix is enclosed within a double layer of peritoneum, which forms a kind of broad ligament, which is attached above to the cœcum and ilium, and was attached externally and inferiorly to the iliac fossa and brim of the pelvis. The hand could be passed behind this expansion. On the external side of the vermiform appendix there is an aperture in this membrane, with defined edges, through which the thumb can be passed, and behind the portion of it which extends with a curve from the vermiform appendix to the ileum, there is a pouch into which a finger can be passed for about two

---

* Now in the possession of Mr. Marshall.

s. The thin membrane passing
the appendix vermiformis cœci
ileum, and leaving the aperture
gh which the strangulation took
, forms an extension of the above-
ioned curve. It has been tied at
pot where it was broken.

e symptoms in this case were such
ually arise from any mechanical
uction in the bowels. There was
ng to indicate the cause, or even
ituation, of the obstruction; for
was not more pain at one part of
bdomen than another. The en-
ment of the uterus, by displacing
small intestines upwards and to
side, was probably the immediate
of the insinuation of the ileum
gh the aperture. This opinion is
med by the circumstance that, in
rst of the two cases quoted at the
f this paper, in which the band
ng the strangulation was, in size
ituation, very much like the one
is case, the immediate cause of the
gulation was evidently a parti-
posture of the patient. The
d state of the ascending colon
no doubt, a consequence of the
gulation, or of the distension
followed it: a twisted state of
owels has been met with in seve-
ses of intussusception and stran-
ion by membranous bands. There
any cases on record of strangula-
f the bowel in an aperture made
rbid adhesion of the vermiform
dix of the cœcum with neigh-
ng parts; but the appearance of
embrane in this case, the absence
dences of old inflammation in the
nen, and the circumstance that
embranous band appears to be a
al continuation of a larger fold,
ne to consider it as a congenital
ction of peritoneum, leaving an
ure on the inner side of the
dix vermiformis similar to the
e see on its outer side.

e recorded cases which I have
able to find that most resemble
just detailed, follow as an appen-
but the authors do not offer any
on as to whether the apertures
congenital or not: there is, how-
one case of strangulation from a
nital malformation related by M.
ati, p. 468, of the 3d vol. of the
Mémoires. In that case the
gave off a branch 2½ feet previous to its termination, in the form of a funnel, terminating in a ligamentous band about 5 inches in length, and attached by its other extremity to the mesentery, leaving an opening through which some loops of the ileum became strangulated. This branch, I conclude, was the remains of the ductus omphalo-mesentericus.

Mr. Thomas Morton and Mr. Prescot Hewett have informed me that they have seen the appendix vermiformis enclosed in a fold of peritoneum forming a kind of broad ligament.

I subjoin two cases translated from the Mémoires de l'Academie Royale de Chirurgie:—

"M. de la Faye informed us in 1750 of a strangulation of the intestine by a similar band. Being invited to assist at the opening of a body in order to make a report in concert with the surgeon in attendance, he learned that the subject, who was newly married, had experienced on the night of his nuptials a very severe pain of colic, such as had occurred to him for the last seven years every time that he had lain with a woman. On this occasion it was more violent than before, and followed by all the symptoms which accompany a volvulus. The patient died in thirty-six hours, notwithstanding all the assistance that could be rendered him in that short interval. The belly was swelled out like a balloon: on its being opened the cause of death was evident. On going over the intestines with care, there was remarked, at an inch from the termination of the ileum in the cæcum, a band of the thickness of a strong thread, and of three finger-breadths in length, attached on one side to the appendix cæci, and on the other to the part of the mesentery nearest to that intestine. The ileum had passed under that band to the extent of a foot: the strangulated portion was collapsed and inflamed. From the stomach to the seat of strangulation the intestinal canal was very much distended, and the part beyond the stricture was in the ordinary state. The band must have been vascular, for it was black and already gangrenous, so that it required only the slightest effort to break it. If the patient could have lived till the rupture of this band had taken place, he might possibly have recovered."—*M. Hevin on Volvulus*, in

There was an annular ope
mesentery of a ligamentous
through which had passed
with a part of the colon, a
extent of the ileum. T
which came on, having c
relative proportions, these
intestine became strangu
not being able to disengage
they mortified, after having
first bilious and then st
vomiting, as usual in such c
parts could be withdrawn
apeiture, after evacuating
ture the air which distend
Ibid. p. 239.

54, Frith Street, Soho Square.

CASE OF

SUPPLEMENTARY SPLE
ING DEATH,

FROM THE PATIENT BEING PL
SUPINE POSITION, IN CON
OF A FRACTURED TH

By W. H. Bainbrigge, Es
Surgeon to the Northern Hospit
1846.*

May 5, 1845, Jas. Hughes,
admitted into the North
under my care; a groom,
habits. While exercising
short time before his ad
animal reared, and fell up
was immediately brought

and connected with the great omentum, which it dragged down, and formed a band of cord, which passed in front of the large bowel at the commencement of the rectum, pressing it against the posterior part of the brim of the pelvis. When on his back the tumor would necessarily fall into the cavity of the pelvis, and cause the cord of the omentum above described to exert so much pressure on the bowel as to impede its functions. On further examination, the tumor was found to be a supplementary spleen, enclosed between the layers of the omentum, and receiving for its supply one of the divisions of the splenic artery, which, in fact, divided into two branches,—one to each spleen.

The above case is chiefly interesting in a physiological point of view. Pathologically regarded—(beyond the circumstance of death being caused by the pressure of the contracted portion of the great omentum)—it possesses no feature of practical interest, as there were no means of ascertaining that this pressure was caused by the position of the patient and that of the supplementary spleen. It is, however, interesting as being one fact more added to the list of anomalous cases of the kind on record. Singularly enough, accidental change of posture on the part of the patient would have removed the mechanical obstruction and saved life, as it seems to have done in the previous attack of constipation.

The existence of accessory spleens is a well known physiological fact: their occurrence, however, is very rare. Their varieties are numerous, and they are usually found in the lower extremity of the organ, not far from the fissure, either in the gastro-splenic ligament, or, as was the case in the present instance, in the great omentum. Their form is commonly round. That found in this case was in shape precisely like that of the spleen itself, and that it was identical in structure will appear from the following statement, for which I am indebted to Dr. Inman, who was so kind as to examine it microscopically for me:—"The spleen you exhibited last night possesses conclusive proofs of identity in the peculiar disposition of the arteries and veins in its tissues;—in its *well-marked fibrous and trabecular character* and the *remains of the Malpighian corpuscles*;—in the existence of a few distinct granules, with the remains of others: and in the complete absence of anything like a microscopic cell-structure."

THE SCOTCH EPIDEMIC FEVER OF 1843-4.

By John Richard Wardell, M.D. Ed.
Late President of the Royal Physical and Hunterian Medical Societies, Edinburgh; &c. &c.

[Continued from p. 794.]

The subjoined case of Donaldson forms another good exemplification of the yellow affection.

Case VII.—*Severe form of the yellow affection terminating fatally.*

James Donaldson, æt. 55, a shoemaker, from Campbell's Close, High Street, admitted Nov. 28th, 1843.

States:—Five days ago (Nov. 23d) had a rigor, which was succeeded by the usual initiatory symptoms of the epidemic.

On admission, complains of muscular and arthritic pains, tenderness at epigastrium, with nausea, and occasional vomiting: the ejected matter forming a dark green bilious-looking liquid. Skin generally is of a yellow tint, and tunica adnata of a similar hue; tongue covered (except at apex and edges) with a thick yellowish brown coat, but generally moist; urine high coloured, and last stool reported to be dark. Skin feels hot and harsh to the touch; says he has slept badly for the last two or three nights; has a good deal of headache, which is referred chiefly to the frontal region; bowels confined: pulse 108, rather compressible.

Abradatur capillitium. Habeat Infus. Cathart. ℥iv.

Vespere.—Symptoms a good deal the same as those in the description of his case at noon; bowels not moved, and head feels hot.

Cloths immersed in cold vinegar and water to be frequently applied to the head, and the cathartic infusion may be repeated if the bowels be not opened in two hours time.

Nov. 29th.—Complains of a good deal of pain in the head; conjunctiva of a deep saffron yellow; skin generally of a bright lemon hue, being most distinct upon the neck, chest, superior extremities, and abdomen:

on legs and feet not so intense as on other parts. From being a light yellowish tint, as reported yesterday, the previously described symptoms have supervened during the last night. Bowels confined; pulse small.

> Infus. Cathart. Rep. ℞ Calomelanos, gr. vj.; Pulv. Opii, gr. iss.; Conf. Rosæ, gr. viij. Sint pilulæ duæ statim sumendæ.

Vespere.—Bowels opened three times; dejections dark and bilious; urine passed in tolerable quantity, and of a deep porter-colour; otherwise much the same.

November 30th, *Mane.*—Skin very yellow to-day, especially on neck, face, chest, and arms; great tenderness over the hypochondriac regions; tongue not so much loaded, but glossy and dry; pulse small and weak; breathing laborious and hurried; bowels open.

> Pilulæ c. Calomel et op. Repetantur. Habeat Mistura Camph. ℥ij. omni secunda hora.

Vespere.—Much the same as at noon: pulse slightly improved.

> Mist. Camph. Cont.

Dec. 1st.—Yellowness intense to-day; is laid on his back low down in the bed. Pupils contracted; breathing hurried and short; much pain over the hypochondriac and epigastric regions; slumbers a good deal; bowels open; fæces dark olive-coloured; urine of a porter-like appearance, and scanty; extremities cold and clammy; pulse 80, weak and thready, as to be almost imperceptible.

> Hot bottles to be applied to the feet. Emp. Lyttæ hypochond. dext. statim applicetur. Enema Terebinth. quam primum inject.
>
> ℞ Sol. Mur. Morph. gtt. x.; Sp. Æth. Sulph. gtt. xx.; Aquæ Menth. Pip. ℥iss. Sit haustus statim capiendus. Habeat Sp. Com. ℥j. in aqua caldia om. hora.

Vespere.—Symptoms generally assuming a more alarming character; tongue dry and glossy; pulse still so weak that it is with difficulty discovered at the wrist; pupils small and piercing. Is insensible, and slumbers constantly, except when for a moment roused, and then upon interrogation a partially coherent answer is returned.

> Sp. Communis Cont. Haustus Rep. Enema Terebinth. Inject.

2d.—Continued to sink,
during the night.

Sectio cadaveris fifty hou
death.

Head.—Brain.—Removin
varium, the cerebral vessels l
and turgid. Some febril
beneath the arachnoid; co
extremely deep. In lateral
℥j. of serous effusion, and
were discovered on removing
brum in the base of the skul

Chest.—Heart and lungs h

Abdomen.—Liver weighs 5
is gorged with a dark bloo
looking fluid, which, on
being made in the organ,
pressure easily expressed fro
surfaces. Gall-bladder fill
tension with a thick, viscid,
coloured bile, being so tena
it might appropriately be te
tile; and a portion can be
means of a knife, in a c
string to the height of three f
gall-ducts are perfectly pervio

Kidnies remarkably yellow,
pelvic lining is of a saffi
but present no other morbid ch

Spleen weighs 12 oz., conges
and easily broke between the
but not diffluent.

Intestines slightly injected,
traces of ulceration in the iliu
other part.

Remarks.—On the day of
sion, being the fifth of the
from the general dinginess
surface, it was quite evident t
case would be one of the yello
plication, and from the accomp
symptoms it was to be anticip
a severe form. There was ten
at the epigastrium, vomiting of
bilious matter, and discolour
the conjunctivæ; the stools we
being highly saturated with bi
the patient complained of a go
of frontal headache. On the
day the yellowness had become
increased, and was observed
deeper hue on those parts as
mentioned. According to th
report, being that of the seve
symptoms of a very formidable
were manifest; the yellowne
now become intense, there wa
tenderness at the hypochondr
tongue, quick and feeble pul
hurried respiration,—[illegible]
riously indicating the [illegible]

of his condition. Early on the subsequent and last day the unwelcome preludes to dissolution were indubitably at hand. The helpless manner in which he laid in bed evinced a general declension of muscular power; the contracted pupils and lethargic state showed the very probable effusion of serum into the various cavities of the brain; the dejections continued dark, and surcharged with bile; the natural temperature rapidly decreasing, and the pulse now had become so weak as to be almost imperceptible. These symptoms became gradually more alarming until death.

To the post-mortem appearances I would particularly beg the attention of the reader, as it is by first attentively surveying the operations of morbid actions, and then examining the physical conditions after death, that cause and effect can most satisfactorily be traced, and those fundamental truths arrived at by which our improvement in practice is likely to be acquired, though, as previously observed, the autopsies made in fever are less conclusive than in any other class of disease. The brain was turgid, and the blood-vessels unusually injected, and not less than ℥xiii. of serous fluid had been exuded,—well accounting for the cephalic symptoms prior to dissolution. The liver was considerably larger than the average weight, being much engorged and distended, by which may be explained the cause of the dull aching pain experienced in the right hypochondrium. The gall-bladder was unusually full, and its contents anormally viscid and tenacious, notwithstanding its natural outlet being in no manner obstructed. The pelvic lining of the kidnies, even, were stained with the yellow colour; and I well remember, when opening the body, that the cartilages of the ribs of the sterno-clavicular articulation, &c. were similarly tinged. The congestion of the spleen might have been anticipated from the pain complained of in the left hypochondrium, and we saw that it was morbidly enlarged. When we consider that a diseased secretion like that which was poured out by the biliary apparatus *was for some time brought into contact with the digestive surface, it is a very probable inference that more or less vascularity would be* produced in the mucous membrane of the canal. Ulceration in the lower part of the ilium, and about the ileo-cæcal valve—the most common parts in which this morbid appearance is found in true typhus*—was scarcely, if at all, observed in the inspections of the seven days' fever; and from what I have heard and read respecting the yellow fever abroad, an ulcerative condition in these parts is very rarely witnessed in that disease.

Black vomit, although it very seldom occurred in the Edinburgh hospitals,—in fact, forming but an insignificant fraction when compared with the whole number, — yet as some unequivocal cases did occur, and as in other parts of the kingdom they were more frequently met with than in the metropolis, consequently this particular feature cannot with propriety in silence be passed over. In yellow fever epidemics abroad undisputed black vomit is the concomitant of the most malignant description of that disease, and, as before stated, from this symptom, in conjunction with that of yellowness, many form their diagnosis of that affection. The writers of ancient times, the older authors, and modern physicians†, regard black vomit as a very alarming condition‡; and, certain it is, that when it has fairly commenced, a very small proportion of the patients recover. Vomiting of dark-coloured matters has sometimes been noticed during febrile attacks in this country, and certain physicians have then imagined that such fever was a modification of the real yellow fever, and that their only difference was in the degree of their malignancy, and not in their radical pathology§: this opinion, however, is quite discrepant to the notions of many respectable authorities. The few cases which I saw in Edinburgh all died, and these were patients in whom well-marked indications of jaundice were present. On referring to the accounts given by various writers who have recorded epidemic visitations of yellow-fever, all agree in considering this a most fatal symptom, and, during an epidemic, out of many hundreds of cases, where the black-vomit had supervened, scarcely any recovered, and such recoveries as did take place were a mere fraction when compared with the whole; perhaps one or two per cent., or even less than that number.

---

* Louis, Broussais, &c.

† Hippocrates, Thucydides, Celsus, Galen, Sydenham, Fordyce, Bancroft, Jackson, Carstell, Rush, &c.

‡ Blane considers it a positively hopeless symptom.

§ Stokes, Graves, &c.

Respecting the nature of the ejected matters, and the real cause of the blackness, there are various opinions. The ejections which I saw in the seven days fever, were not so dark on the first appearance of this symptom as they were when it had continued for some time; then, reaching its greatest intensity of blackness, it again gradually became of a lighter colour. At the commencement the matters looked like simple bilious vomiting, of a dark greenish hue, from which they became of an inky blackness, and then to a brownish grey. Dr. Bone*, when speaking of the yellow fever of the West Indies, says, that a flaky brown blood-colour usually precedes the inky-black. Without troubling the reader with an enumeration of the several theories that have been advanced respecting the consideration in question, the following conclusions are perhaps the most correct inferences in accounting for the morbid product alluded to:—viz. The villous coat of the stomach being in a state of partial disorganization, rupture of the arterial capillaries takes place, and the blood is thus exuded into the cavity of the stomach, and mixed with the contents of that organ; the gastric secretion being morbidly increased, and possessing perhaps an undue degree of acid properties, a chemical action ensues, by which the contained fluid becomes inspissated, and acquires a dark colour of various degrees of intensity; this, of course, being determined according to the proportional admixture of bile, of exuded blood, and the power of the secreted acid. The kind and quantity of liquids drank, as well as other descriptions of ingesta taken, by diluting and acting upon the morbid products contained in the organ, exert their due influence, and modify the characteristics of the vomited matters. When this affection is present there is always more or less vitiation of the bilious secretion, and, indeed, some have asserted that the black ejections are nothing more than this diseased secretion. The bile now being preternaturally viscid, its incorporation with an acid produces a gelatinous sediment, and the tenacity of this sediment varies according to the viscid nature of the bile, and the strength of the acid; Huxham and Baglivi long ago demonstrated this fact. That blood is thrown out in the manner described above, has been proved by ocular demonstration. In one or two instances which I saw there were various ecchymosed patches on the villous coat of the stomach, and in the organ was discovered an inky-looking fluid similar to that vomited by the patient before death. In the instance of Peter Reid, now given, is afforded a good illustration of this complication.

CASE VIII.*—*An example of "black-vomit"—the case terminating fatally.*

Peter Reid, æt. 35, a navigator, single, hair dark, eyes deeply set, features strongly marked, chest broad and capacious, stout and muscular. Admitted December 28th, 1843, (to the medical wards.)

This patient first entered the surgical hospital for an injury done to one of the fingers. Immediately on admission, symptoms of the prevailing epidemic became manifest, and he was quickly sent to the medical department of the institution. On the 24th, the day of his entrance into the surgical wards, a slight tinge of yellowness was observed in the skin and conjunctivæ.

Dec. 28th, *Vespere.*—States that he had much vomiting last night of a dark grumous fluid; yellowness of surface now very evident, as also of eyes. Some pain and tenderness on pressure over the hypochondriac and epigastric regions: on taking a full inspiration, thorax perfectly expands, and no uneasiness is experienced. Pupils slightly contracted; bowels confined; tongue moist, but loaded with a dirty-whitish yellow coat. Pulse of natural frequency and good strength; had vomiting to the extent of two or three quarts since admission this afternoon, ejection being of a dark-looking colour, and about the consistence of hare soup. On allowing the vomited matter to stand and settle, a black coffee-grounds like sediment is deposited.

---

* Bone on the Fever of Barbadoes, 1821.

* Being unavoidably absent from the pathological theatre during the day in which this body was examined, and as no particular details were taken of the autopsy, I regret that I cannot present the reader with a more than general statement of the inspection. The late Professor Graham, who was present, informed me that there was a morbid quantity of serous exudation in the cavities of the brain, that the liver and spleen were engorged, and in the stomach was discovered some grumous black matter precisely resembling that which had previously been ejected; also that the villous coat of this organ presented some ecchymosed looking patches, which left no doubt as to the exudation of blood.

Enema purgans statim injiciatur. Postea habeat pulv. cum Hyd. Chlor. gr. vi. Pulv. Rhei. gr. x. Sinapismus epigastrio applicand.

Dec. 29th, at visit, noon.—Reported to have vomited four quarts of inky-looking fluid, about the consistency of coffee-grounds. Skin of moderate temperature; bowels opened, and tenderness over the epigastrium much the same. Slept but little last night; pupils still small; intellect pretty natural; urine passed in tolerable quantity; complains of a good deal of thirst. Pulse of tolerable strength, and moderate frequency.

Enema Amyli c. Sol. Mur. Morph. gtt. xl. statim injiciatur. Bibat. decoct. avenæ.

Vespere. — Sickness not so violent since administration of injection, yet still has had vomiting to the extent of a quart of the same description as the last. Complains of no pain, except over hypochondriac and epigastric regions; skin hot; much thirst; pulse a little quicker.

30th, Noon.—Slept but little during the night; had vomiting to the quantity of three pints, the matter not quite so dark as hitherto. Pupils small and contracted; complains of pain in the head; bowels open; surface rather cool and clammy; pulse smaller than it has been; urine passed in tolerable quantity. Yellowness not so intense.

Habeat Sp. Communis. ℥iv. Cap. ℥j. in aqua calid. et saccharo, 4ta quaque horâ.

℞ Sol. Mur. Morph. ʒij.; Sp. Æth. Nit. ℥ss.; Sp. Ammon. co. ʒij.; Mist. Camph. ℥vij. Sit. Mist. Cap. ℥j.; omni tria. horâ. Abradatur Capalitium.

Vespere.—Much the same as at visit; vomiting not so severe.

Enema c. Sol. Mur. Morph. repetatur.

31st.—Did not sleep much during the night, though he slumbered at short intervals; was delirious; vomiting not so persistent, and the ejected matter was less in quantity and of a more natural colour. This morning seems somewhat unconscious, and answers questions confusedly. Skin feels cold and clammy; bowels open; urine voided in tolerable quantity; much thirst; tongue coated and dry. Pulse 96, small and weak.

Sp. Com. et Mist. Contr. Emp. Lyttæ vertici applicand.

℞ Calomelanos, gr. vi.; Sacch. Alb. gr. x. Sit pulvis s. s.

Vespere.—Seems much worse this evening; is now quite insensible, and has slumbered a good deal during the afternoon. Surface not so warm as natural; lower extremities becoming cold; tongue dry; pupils small; pulse quicker and more compressible.

Bottles of hot water to be applied to the feet.

℞ Sp. Æth. Rect. gt. xxx.; Sp. Lavand. co. gt. xxx.; Mist. Camph. ℥ij. Sit. haustus, s. s. Sp. Communis. ℥j. in aqua calida omni horâ.

Jan. 1st, 1844.—Extremities became colder; surface chilly; had slight muttering delirium, and continued to get rapidly worse until 8 o'clock this morning, when he expired.

Remarks.—On a perusal of this man's case it is seen, that with the accession of vomiting were ushered in the most unfavourable symptoms. On the fourth day the ejections were dark and grumous, and on the next they had become of an inky blackness. On the sixth the vomiting still continued, but the matters ejected were of a somewhat lighter colour; there were now the unwelcome symptoms of cephalic affection, while the natural temperature was becoming below its standard; in the evening of this day the vomiting had in some degree declined, but with no mitigation of the other grave symptoms. On the seventh day, delirium, feeble pulse, cold surface, &c. proclaimed too obviously that dissolution was at hand, and he sank early on the following morning. I well remember that this individual, from the first of his admission into the medical wards, was troubled with an unusually urgent thirst, though the pulse was low, the tongue pretty moist, and the surface cool.

[To be continued.]

CASE OF LITHOTRITY IN THE FEMALE.

By John C. Warren, M.D.

Professor of Anatomy and Operative Surgery in Harvard University, Boston.[*]

The lithotritic operation in the female is generally considered to be one of great facility, and the anatomy of the organs concerned certainly favours this opinion. Having had occasion to resort to this operation two or three times, I found it less easy than I had expected. A principal difficulty encountered in cases which I have treated, arose from excessive sensibility of the bladder, which could not be obviated by narcotics of every description, applied in every possible mode. In doing these operations, I experienced some inconvenience from the want of sufficiently minute descriptions of the mode of performing it, and of the circumstances attending it. With the hope that those who may have occasion to employ it, may derive advantage from the publication of such details, I shall venture to give one of these cases with all its minutiæ.

Case.—Mrs.——, a lady about 50 years of age, applied to me in the month of May, 1840. She informed me that she was affected with a dull, constant pain, in the right lumbar region; this pain, though not acute, was of a distressing nature, being accompanied by a sense of weight or pressure. Occasionally, she experienced numbness in the side, extending into the corresponding limb, without, however, affecting the feeling or the motion of this limb. The flow of urine was generally free, and even more frequent than natural, appearing, at times, to be connected with a pain in the right side of the abdomen; its appearance to the eye was healthy. The other functions, at the time I saw her, were in the natural state.

She also informed me that, three years before, she had an attack of violent pain in the right lumbar region, which, after a paroxysm of two days' duration, terminated in the discharge from the bladder of a calculous concretion: this, I afterwards learned, was probably composed of the ammoniaco-magnesian phosphate. Since that period of time, she had had some similar paroxysms, but without passing any more calculi.

Concluding, from the history, that this lady was affected with calculous concretions in the pelvis of the kidney, I recommended her what I had used with remarkable advantage, the bicarbonate of potassa, to the amount of three drachms in the day, which was continued for three or four weeks. At the same time, blisters were applied frequently to the back, the bowels were kept open, and the warm bath was used every five or six days. Under this treatment she became more easy, and felt, at first, very confident of being essentially better; but after a while, as she ceased to improve, I desired to examine the affected part, and on making pressure immediately below the ribs of the right side, near the spine in the region of the kidney, I perceived a slight induration. Pressure upon this part produced some uneasiness, and a sense of numbness through the corresponding limb. Finding, as already stated, that the case was not essentially improved, I then advised the use of the diluted sulphuric acid, mixed in a confection, and taken as largely as she could bear. This was continued three or four weeks without any decided effect, with the exception of a cloud in the urine, which did not appear when the acid was not employed. I therefore advised her return to the bicarbonate of potassa, which was continued for the remainder of the summer, about three months.

During the latter part of this summer, 1840, she began to be affected with paroxysms of pain in the right side, thence shooting down the right side of the abdomen, and through the right lower extremity. To mitigate these, I advised the following course whenever they occurred: first, hot fomentations of the decoction of poppies to the right lumbar and iliac regions; secondly, large enemata of warm water, containing a drachm of the tincture of opium; thirdly, the warm bath. These applications, with some minor auxiliaries, generally relieved her in a few hours, leaving her, however, very ill from the effects of the opium.

In the latter part of the autumn, after one of these paroxysms, she felt, as she thought, something descend into the bladder; this was soon followed by me pain in the region of that organ, d occasional interruptions to the inary discharge, the urine having now come offensive. These symptoms aking it nearly certain that a stone d passed into the bladder, I requested sound the patient, and on doing this, soon detected the stone, which was small size. Previously to introucing the sound, I injected some arm water, in order to enable me to amine the bladder with less interrence to the coats of that organ. This uid was retained for an hour, and hen it passed off, it was immediately llowed by a substance which filled he urethra, and produced considerable ain in the passage. I was sent for gain to visit the patient, and having ntroduced a probe, detected a stone edged in, filling the urethra. I ndeavoured to extract this by a small air of forceps, but found they could ot be passed so as to embrace the tone; I then took a strong curette, nd introduced it between the stone nd the upper part of the urethra, with he forefinger of the left hand pressed n the internal part of the stone, and hus confined the stone in the passage, o as to prevent it from being pushed back by the curette. By these means I was enabled to insinuate the instrument beyond and behind the stone, and thus, by the curette in the urethra, and the forefinger of the left hand on the outside of this canal, the stone was gradually brought to the meatus, where it experienced a decided opposition. The curette was now withdrawn, the forefinger of the left hand continuing to press the stone to the meatus; the forefinger of the right hand was employed to push the meatus back upon the stone, thus uncovering its extremity. The stone was thus sufficiently exposed to be seized by the forceps and withdrawn, to the great relief of the patient. This calculus was an inch and a half in length, and half an inch in diameter; it was somewhat rough on its surface, and was found, by Dr. Gay, who analysed a part of it, to be composed of the phosphate and carbonate of lime. She bore the operation with great firmness, and on the following day was free from any material uneasiness; she had a perfect urinary evacuation, and was gratified with the hope of freedom from *sufferings under which she had so long laboured.*

---

[*] Communicated by the Author.

This agreeable calm was of short duration. Three days after my extraction of this calculus, the patient informed me that she had symptoms of another stone. These symptoms gradually became more distinct, till they assumed a character perfectly decisive; she had frequent inclination to pass water, accompanied with pain it its passage, particularly towards the latter part, sometimes a sudden interruption to its flow; the colour was that of blood, with a mixture of mucus, and there was a sensible movement of the stone when she turned over in bed. As the injection of warm water had been followed by a favourable result, I repeated it, but without the same success as on the previous trial.

It now appeared necessary to adopt some decided measures for the removal of the calculus, and I therefore presented to my patient the different modes of operating adapted to this object. I explained to her the mode of extraction by dilating the urethra by bougies, by sponge and by the urethral dilator; secondly, by the operation of lithotrity; thirdly, by lithotomy. After some consideration, she agreed to the introduction of the instrument of Heurteloup; but, on repeated trials with this instrument, I found that such was the size of the bladder, and the number of plicæ or folds into which its mucous membrane was rolled, when in the contracted state, that it was impossible to seize the stone without the patient's assuming a posture more favourable to the use of the instrument, and the necessary aid of professional persons. I attempted to obviate the difficulty by the previous injection of warm water, but this could not be retained long enough to allow me to make use of the instrument.

The patient now requested me to intermit my efforts, and permit her to employ the specific of Dr. Lee; and to this I readily agreed. The pills of Dr. Lee were taken, and in a few days their effect upon the urine was very remarkable; large quantities of a sandy substance began to appear in the urine, and continued to increase till she had passed two or three drachms in the course of the twenty-four hours. This substance was of a gray colour, capable of being readily reduced to a fine soft powder, possessing a slightly saline and urinous taste, and was found to be composed of the phosphate of ammonia and magnesia, and some phosphate and carbonate of lime. This deposit continued daily in greater or less quantity, for four weeks, at which time I sounded to ascertain the condition of the stone, and had reason to believe it increased in size, and covered with a rough coating. Presuming that the lithontriptic pills had caused this copious deposit from the urine, I was apprehensive that their effect had been, and would continue to be, to increase the size of the calculus, and therefore advised the discontinuance of the medicine.*

The paroxysms of pain, the bloody and mucous discharge with the urine, the frequent interruption of the passage of this fluid by the obstructing calculus, and a general state of debility and difficulty of motion, made it necessary to adopt some measures calculated to remove the stone. At this period the patient was compelled to lie in bed the greater part of the time; she very rarely sat up; her appetite was much diminished; she was obliged to resort to opiates, by enemata or the mouth, and was unable to turn in bed without considerable suffering.

The patient now decided in favour of an attempt to remove the stone by dilating the urethra, and after once or twice using very large bougies, and finding the dilatation could not be accomplished in that way; inferring, also, from the inability of the patient to bear long-continued pressure upon the urethra, that the use of the sponge would, probably, be impracticable, I employed the urethral dilator of Weiss, and, after two or three applications, succeeded in dilating to No. 6, as marked by the index of that instrument. I was now enabled to introduce my little finger, so that the point of it entered the cavity of the bladder, and felt great hopes that, after one or two more trials, I should be able to dilate the urethra sufficiently to withdraw the stone entire. But, notwithstanding the courage of my patient, the sensibility produced by the dilatation was so great as to render her unable to bear the further use of the instrument, and it became absolutely necessary to desist from all operations, except those calculated to soothe her pain.

After allowing some time for the patient to recruit, it became a subject of consideration, whether she would submit to the operation of lithotrity or lithotomy. The operation of lithotrity, I assured her, might be employed with almost certain success, but that the time required for its consummation might be considerable; I was also able to assure her that this operation would not be attended with any danger. On the other hand, the operation of lithotomy would, undoubtedly, relieve her immediately from her state of suffering, but could not be said to be wholly free from danger.

She wished to know how the operation of lithotomy would be performed, and I endeavoured to explain to her that I should prefer, in her case, the method which had been adopted by my respected instructor, Baron Dubois, by an incision from the superior and anterior part of the urethra, towards the symphysis pubis. An incision in this direction, I thought, would give sufficient room for the extraction of a stone of so comparatively moderate a size as hers; for I judged the stone to be about two inches long, and not more than half an inch in diameter. The lateral operation, between the vagina and the ramus of the pubis, I judged could not be readily done without wounding the vagina, as, the lady having had a number of children, this passage lay close to the bone. In order to aid her in making up her decision between the two operations proposed, she desired a consultation with Dr. Miller, a distinguished surgeon, and Dr. Wing, a near relative; both of them, after due consideration of the circumstances, agreed to recommend the operation of lithotrity, which was assented to, and thereupon commenced.

The patient being placed on a table, about three feet and a half high, supported by the two gentlemen above mentioned, with the aid of Dr. Mason Warren, I first injected the bladder with warm water. I next introduced the brise-pierre of Heurteloup, and bringing the instrument to an angle of about 50° with the trunk of the body, readily struck the stone in the fundus of the bladder, on the right side of the vagina; then, opening the instrument, caught the stone and crushed it by the screw. The apparatus was now withdrawn, with as large a portion of the stone as I thought would pass through the urethra; some portions of calculus were discharged after the operation; the patient suffered very little.

---

* In the case of another lady, a patient of mine, who employed Dr. Lee's lithontriptic pills, the patient was relieved soon after she began to take them, was ultimately cured, and I believe now continues well at the end of a year. The calculi consisted, in the case of this lady, of a great number of lobular stones, each about double the size of a pea, and composed of white carbonate of lime. This lady had employed the alkaline carbonates before mentioned, and also sulphuric acid, without benefit.

These proceedings were resumed in two days after, and continued at about the same intervals, until seven sittings had been completed; in each of these, the stone was found with very little difficulty, was crushed, portions extracted, and other portions washed away afterwards by the urinary evacuations. In these operations, the brise-pierre of Heurteloup, the ramaseur de gravier of Civiale, and a shorter brise-pierre, adapted more particularly to the anatomy of the female, which was contrived by Dr. Mason Warren, were employed. On the eighth sitting, there was discovered the slight remains of a calculus, but so small, and so involved in the folds of the mucous membrane of the bladder, that it was impossible to seize it by any instrument, without seizing along with it the mucous coat. After reiterated attempts to remove it by injections, finding that this relic could no longer be felt by the instrument, employed in the most careful manner, I desisted from all further treatment.

From this time the patient was relieved from all her sufferings; the urine flowed in a perfectly natural manner, without interruption, her strength recruited, and, after a winter's confinement, she was enabled, in the spring of 1841, to leave her house and go into the country. No further calculi, nor fragments of them, have since appeared, nor has the patient had any symptoms of calculus, with the exception of a sense of weight in the fundus of the bladder, and a want of perfect contraction of this organ.

In the month of July, 1844, I made this lady a visit. I found her surprisingly recruited; she had recovered the freshness and embonpoint which she formerly possessed. Her strength was fully equal to what it had been previous to her first attack, and was *sufficient to allow her to take* a part in *the most active domestic* avocations. She had no trouble whatever remaining in the urinary organs. She, of course, felt very much gratified with the relief she had obtained from the lithotritic operations.

Remarks.—The facts most worthy of notice in this case are the following:

First, Symptoms of renal calculus, viz.: sensibility in the lumbar region, numbness in the corresponding thigh, and the occurrence of severe paroxysms of pain in the right side of the abdomen.

Second, The sudden cessation of these symptoms on the dropping of the stone from the ureter into the bladder.

Third, Signs of stone in the bladder, viz.: pain in that region, especially on motion, the discharge of offensive urine, mixed with mucus and blood, and the sudden suspension of the flow of urine.

Fourth, The lodgment of a calculus in the urethra, when small enough to enter, but too large to pass through, this canal; and the retention in the bladder of a calculus too large to enter the urethra.

Fifth, The excessive sensibility of the meatus, preventing its dilatation beyond a certain extent.

Sixth, The excessive sensibility of the inner coat of the bladder on the introduction of instruments and even of water, and, in consequence, the impossibility of retaining a sufficient quantity of water in the bladder to distend it.

Seventh, The consequent occurrence of folds, (plicæ,) in the mucous membrane of the bladder, which involved the stone and prevented it from being seized by the instrument without including the mucous membrane; this constitutes the greatest difficulty in the operation of lithotrity in the female.

Eighth, The uniform position of the calculus in that part of the bladder lying on the right of the vagina, and attainable by the instrument when placed at an angle of 50°, formed between the instrument and the perpendicular line of the body.

Ninth, The curious deposit in the urine from the use of the lithontriptic pills.

Tenth, The perfect restoration of the patient's health and vigour, after all her sufferings from disease and operations.

beyond the system of
county election. All
quainted with the nature
sibilities attached to the
must admit, that the fa
of skill and experience, o
of the possession of medi
knowledge, being dema
candidates, is a most s
The mode in which cor
munerated is also in our
tionable. Some differenc
may exist respecting the
paying them by a fixe
according to the number
which they hold. In f
coroners received no fees
formance of their duties, a
the present absurd systen
has been justified by
ancient precedent, yet we
heard this argument so ex
include the abolition of fee
times: yet it appears to
precedent, if valid in th
should be deemed equally
other. For many years t
payment has been by fe
inquest. This, however, is

safely trusted to act in a public capacity.

Rejecting, then, this argument for an absurd mode of payment which leaves the salary of an upright man a matter of mere accident, and that of one who is disposed to manifest *undue diligence* in holding inquests, at almost his own option, let us consider some of the evils which result from it, more especially as they affect the medical profession. The law has made it an onerous charge to the coroner to receive medical evidence under any circumstances; and accordingly it is scrupulously avoided, when the omission to call for it can be passed over with any show of decency. Some coroners invariably decline to call in medical witnesses who have been present at the deaths of persons; they will sometimes take the testimony of a policeman, or any non-professional person, in preference to that of a medical man: because—1st, to the one nothing is paid, while to the other they must advance a fee: in the latter case they become creditors to the county, and swell their expenses to an amount which might call down the censure of a Board of magistrates. 2. They think that after the return of a verdict, the case is not likely to excite further attention. We could not point to a stronger illustration of the evil results which flow from these disgraceful practices than is furnished by a case upon which we have elsewhere commented*. We believe this to be only a type of many cases which yearly occur in England, and which will continue to occur so long as the present system is pursued. Letters have been repeatedly addressed to us by correspondents, stating that although they attended and witnessed the deaths of persons from violence or sudden causes, the coroners had declined to summon them; and had directed the juries to return verdicts of natural or accidental death without receiving their evidence! Nor are medical coroners entirely free from this censure, although we trust that cases like those reported elsewhere* are exceptions to the rule. From the explanation here given, our medical readers will in future be at no loss to assign a reason why the testimony of a nurse, a beadle, or a policeman, is sometimes taken in preference to their own. Under the Health of Towns' Bill, should it pass into a law, the medical officer will be compelled to give evidence without the payment of a fee; and there will then be an opportunity of contrasting the frequency with which an *unpaid* medical witness will be summoned to give evidence, with the practice now adopted with respect to witnesses, whom the coroner cannot summon without the payment of a fee.

The system of paying coroners according to the number of inquests, while it is apt to lead to "undue diligence" in holding these inquiries, creates perfect indifference as to the mode in which the inquiry is carried out. In a very large proportion of cases no post-mortem inspection is made, even where the circumstances most strongly appear to demand it—1st, for the proper determination of the cause of death, and its probable dependence on an act of suicide or murder; 2d, for the accurate registration of the cause of death; or, 3d, for the acquisition of sound medical information upon certain forms of violent death, regarding which medical men have no other opportunity of acquiring experience. We hold this to be a legitimate ground for an inspection at a coroner's inquest, notwithstanding the economical views of county magistrates. In 26 cases of violent deaths enumerated in one *weekly* metropolitan report of the Registrar-General, inquests were held, but there was *not one post-mortem examination!*[*] How little inquisitions so held serve the purposes of the Registration Act, may be determined by the fact, that in two-thirds of all cases of sudden death no cause is assigned! The only information derived from the inquest (upon non-professional testimony) is, that the deceased did really die from some cause or other; *i. e.* from "natural death" or from the "visitation of God!"

---

* *See vol. xxxvii. p. 76.*

* Vol. xxxvii. p. 172.

From the frequent occurrence of these unmeaning verdicts, a very important question has been lately raised respecting the legal right of coroners to hold inquisitions when all the evidence is against the supposition of death from violence; and no other motive can be assigned for conducting an inquiry to what after all is a most imperfect issue, than that which arises from the injudicious mode of payment already adverted to. In the Registrar's Annual Report for 1841, it is stated "that during the years 1838-9, 6708 sudden deaths became the subject of coroners' inquests, in which the *causes* of death were *not* ascertained, and, in fact, that the cause of nearly *two in three sudden deaths* was not stated in the verdicts."[†] Magistrates have been hitherto well pleased to find that the medical expenses of inquests formed a small item in a coroner's account; but they are now beginning to ask, what appears to be a very reasonable question—Why, if medical evidence is not required in so many cases, and no cause of death is assigned by the verdicts, are the inquisitions taken at all? The conclusion to which some of them have come is this—that, while economy is fully studied by the coroner in declining to receive medical evidence, he fails to apply the principle to himself in putting a proper restriction on the exercise of his jurisdiction.

The matter has at length been taken up in a serious form by the magistrates of Devonshire. In 1845 they appointed a Committee, who came to a resolution that "whenever the jury returned a verdict of 'Natural Death,' or 'Died by the Visitation of God,' it was a *primâ facie* case in which the expenses of the inquest ought not to be allowed." Acting upon this recommendation, the magistrates have disallowed the fees on verdicts of "Natural Death," "*unless reasons were shewn them that suspicion fairly arose that such death was not natural.*" Some rule of this kind ought surely to be adopted, or what is there to prevent an inquest from being held upon every dead body merely for the sake of increasing the emoluments of office, and making up the deficiency which may occur in a particular district through a lack of murders and suicides? The coroners, on the other hand, have very recently obtained a rule *nisi* for a *mandamus* to the justices of Devon, so that the case in dispute is likely to be decided by the judges of the superior courts. It is thus far satisfactory to find that this question, which has been so long debated, is at length in train for a settlement.[*]

---

[*] See vol. xxxvii. p. 122.

[†] See vol. xxxvi. p. 592.

[*] As these proceedings are of some interest to those members of the medical profession who are now acting as coroners, we subjoin a short report of the proceedings:—

"*Court of Queen's Bench, Westminster.—Friday, June 5th. The Queen* v. *the Justices of Devon.*—This was a rule calling upon the defendants to show cause why a *mandamus* should not issue commanding them to make an order upon the treasurer of the county, directing him to pay to Richard Bremridge, coroner of Devon, the sum of £1. 6s. 8d., which he claimed as a compensation for his trouble in holding an inquest upon a person who had died suddenly, by the visitation of God, *not having suffered any violence, and there not being any reasonable ground for suspecting that the death was the consequence of any improper conduct whatever.*

"Mr. CROWDER (with whom was Mr. M. SMITH) now showed cause against the rule, and stated that the purpose of the present application was to ascertain whether, in fact, a coroner possessed the power in law to hold an inquest under such circumstances as those which he had un-

We shall conclude our remarks by suggesting—

1. That the system of county or borough election for the coronership should be entirely abolished; and the power to appoint coroners left in the hands of competent commissioners, under restrictions similar to those adopted in the Health of Towns' Bill for the medical officers.

2. That all candidates for the office, whether belonging to the legal or medical profession, should produce proof that they have studied medicine, or at least that branch of it known as forensic medicine; that they have a competent knowledge of the law of evidence, and that, like the Health officers, they are persons of skill and experience.

3. That the coroner should be paid by a fixed and liberal salary; and that, as in all other cases, neglect of duty or want "of due diligence and integrity" shall be punished by summary dismissal.

4. That it shall not be left to the coroner, or, as it now happens in some cases, to the overseer, beadle, or that respectable representative of parochial justice, the constable, to determine in what cases inquisitions shall be held; but that this power shall be vested in the Health-officer, or, if the latter be required to officiate as a witness, in the hands of some other competent and independent person.*

We feel satisfied that the adoption of these or similar rules would cause this office to be filled by competent men; that it would prevent those disgraceful struggles for fees which now exist,—lead to the more certain detection of crime,—obviate the necessity for the frequent disinterment of the dead, and, by tending at the same time to improve medico-legal science, it would render the criminal law more certain and safe in its operation.

Reviews.

The Pathological Anatomy of the Human Body. By Julius Vogel, M.D. Translated from the German, by Dr. George E. Day. London: Baillière. 1846.

It will doubtless be in the recollection of most of our readers that at the commencement of the present series of the Medical Gazette we published an English version of the recent researches of Dr. Julius Vogel on the subject of microscopic pathology: rendering the undertaking still more complete by the addition of numerous

---

tioned above. The learned gentleman was proceeding to the discussion of this question, when

The Solicitor-General (with whom was Mr. Greenwood) objected to an affidavit upon the ground that it had not been filed; and as this technical objection was allowed to prevail, the case was directed to stand over for the present.

The case was again before the Court on the 9th of June. The question, which was previously discussed, appeared to be, whether a coroner was entitled to hold an inquest and receive compensation for his services in every case of sudden death, if, in the exercise of his own discretion, he should be of opinion that it was proper to hold an inquest in the case. The Solicitor-General, however, upon rising to shew cause, narrowed the question by stating that all which he proposed to contend for was, that in the actual circumstances of the particular case in question there appeared enough to justify the coroner in supposing that the death, which was a sudden one, had resulted from some other cause than the visitation of God.

Lord Denman said, that there was so much doubt about the manner in which the circumstances of the case had come before the justices, and about the ground upon which the decision of the justices had proceeded, that the Court considered it necessary to be more fully and accurately informed upon the facts, and the rule would therefore be absolute for issuing the *mandamus*.

It will be remarked that the magistrates do not deny payment in all cases of this description: they require evidence that there was good reason for suspecting that the *sudden death* was *not natural*. Such a suspicion is surely the only proper basis of any inquiry before a coroner. Sudden death in the days of Edward III. commonly implied poison, or the dagger: the mere use of the words "subito mortuos" in the ancient statute cannot be fairly or equitably applied to cases of natural death without any suspicion of violence, whether death occurs suddenly or slowly.

Our readers will find *some remarks on this subject, and on coroners' inquests generally, in vol. xxxvii. p. 1086.*

* A question might arise respecting the withdrawal of this power from the hands of a coroner. We admit that the most serious objections to its exercise by this functionary, would be removed when tests of skill and experience were required, and his services were no longer paid by the *number* of inquests held.

publication of these
Vogel's researches, t
croscopic pathologist
one volume of his lo
nual of the Patholo
the Human Body; a
by his other literar
labours has shown hi
fied for the task, ha
providing an Englis
valuable work.

We have here, then
the first volume of Vo
contents of which r
morbid anatomy. Th
is to be devoted to the
pathological changes
cial organs of the bo
stated when it will
volume before us com
various questions whi
development of gas in
with a full considerati
of dropsy, which is
and with the vario
changes undergone
Vogel offers but little
on the latter subject;
scarcely to be wondere
how little of real im
real practical value h
from the labours of th
late years almost exc
their time with so m
subject. While we a
to the praiseworthy

bid products, as well as of healthy tissues. This theory, as explained by Schleiden, Schwann, and their followers, and adopted by most modern physiologists, has, however, undergone considerable modifications of late; and it appears not improbable that its importance has been greatly over-estimated, and that ere long it will give place to another, which, if not entirely different, will at least be more consistent with facts which are familiar to most microscopic observers. In the description of pus Dr. Vogel is peculiarly at home; having some years ago written an excellent treatise on the subject.* The account which he now offers is quite complete so far as our present knowledge extends.

A large section of the remaining portion of the volume is occupied with the consideration of tumors. The mode in which this subject is treated, as well as the divisions and subdivisions in which it is arranged, evince a very extensive and sound acquaintance with all that relates to the structure and development of these morbid growths. The remainder of the volume is taken up with an account of the changes effected by inflammation, with a description of the various parasitic organisms which are known to infest the human body, not omitting, *inter alia mirabilia*, our constant, yet proverbially fickle, friends, the fleas, of the habits, instincts, and migratory propensities of which a very graphic account is furnished. A brief but clear summary of the numerous congenital malformations of the human body follows; and, finally, there is a short account of the changes which the body undergoes after death.

Such is an outline of the contents of the volume before us. It is decidedly the best work on the subject of which it treats in the English language; and Dr. Day, whose translation is well executed, has enhanced its value by a judicious selection of the most important figures from the atlas, which are neatly engraved. Of these, however, it is unnecessary to say more, since the majority and best of them have already appeared in the pages of this journal.

---

* Ueber Eiter. Eiterung, und die damit verwandten Vorgänge. Erlangen. 1838.

Consumption, its Symptoms and Treatment. By GEORGE MOORE, M.R.C.S.L. Pamphlet. 8vo. pp. 32. London: Renshaw. 1846.

THE author tells us in his preface, that "experience of the beneficial results of the remedies recommended in the following pages, must be his apology for intruding this small work on the notice of the public." That the work is not intended for the profession, is further evident from the following statement. Its object is "to convey to the non-professional reader (!) a correct, clear, and comprehensive notion of that state of the lungs designated consumption," &c. The author adopts the vulgar idea that the disease consists in a *decay* of the substance of the lungs, (21) thus confounding the wasting of the body with the diseased condition of the respiratory organs. One of the remedies "frequently of great utility" is oxygen; and it has produced marked benefit, (23). We have known this remedy fairly tried: —the "marked benefit," as every one would expect, was only temporary; and in one instance the so-called remedy hurried the patient, by the over-stimulus produced, into an early grave. We looked with some anxiety for a description of the author's remedies; but, at p. 25, we are informed, "that any minute description of what is to be done in the various stages of consumption is as impossible to be given as it would be useless were it attempted." After this we naturally inquire, Why was this gilt-edged pamphlet intruded upon the notice of the public?—as it is absurd to suppose that it can be any benefit to the said public to have *only* "a comprehensive notion of that morbid state of the lungs called consumption." The more clear and comprehensive their notion of this unfortunate condition of their pulmonary organs, the more anxious are they likely to be for a knowledge of some of the very successful remedies known to the author, for getting rid of the tuberculous deposits which are gradually obliterating the air-cells. The work is certainly concluded with a case of alleged cure by "naphtha, oxygen, and counter stimulants;" but the details are insufficient to permit any patient to treat himself. He may acquire from the book some dark and mysterious hints respecting his morbid anatomy, but he must go to the author for the plan of getting rid of his tubercles.

We regret that our duty compels us to speak harshly of a work by a professional man; but this essay is obviously written to attract patients and draw practice. The purpose is not even concealed; and while in this respect we approve the author's candour, we must strongly protest against the publication of a showy pamphlet for such an object. The title is moreover defective. It should have been "*Consumption made easy!*"

Notes on the Epidemic Cholera. By R. Hartley Kennedy, M.D., Late Physician-General, and President of the Medical Board, Bombay. 8vo. pp. 279. Second edition, revised. London: Smith, Elder, & Co. 1846.

Fever Physiologically Considered: Considerations on Yellow Fever, Typhus Fever, Plague, and Sea-Scurvy: also the Questions of Contagion and the Quarantine Laws; with an Address to the Public, &c. By David M'Connell Reed, Esq., Licentiate of Medicine, formerly Physician to the Seaman's Hospital at Port au Prince, &c. 8vo. pp. 262. Churchill: London. 1846.

The cholera panic, which a few months since so violently startled not only the public but also a rather large proportion of the medical profession of this country, did not wholly pass away without leaving in its track certain substantial vestiges of its brief career. We have evidence before us that at the very earliest signal of alarm a number of quick-sighted and active-minded physicians stepped forward, each prepared to meet and resist the danger with certain highly prized and thrice elaborated doctrines of his own, which had long slumbered in unworthy neglect either within the recesses of his own desk or in the pages of a still almost unbroken first edition on the shelves of his bookseller, and which he was again eager to thrust between the affrighted public and the menacing danger—

> "Like feather bed 'twixt castle wall
> And heavy dint of cannon ball,"

somewhat regardless of the necessary consideration as to whether the aid which he was so anxiously bringing forward was precisely of the kind which the exigency required, and evidently without the slightest consciousness of the fact that the more than doubtful value of his assistance rather promised to aid than to repel the assaults of the enemy, by producing infinite perplexity in the councils of the assailed.

Full illustration of the above metaphor will be found in the two works now before us. Both of these were, we believe, published at the time when it was anticipated that the Asiatic cholera was about to revisit this country, and each was apparently intended to instruct either the profession or the public with regard to the true nature of this disease, and the best means of resisting its attacks. One of these books is the second edition of a treatise on Cholera written some years since by a physician who appears to have drawn his entire experience from the study of disease as it occurs in the East Indies; the other, a new brochure, from the pen of a gentleman whose doctrines do not carry with them any very strong internal evidence of being founded upon personal experience at all, but whose principal sphere of observation appears to have been the island of St. Domingo. The first is of course a far more practical and valuable work than the second; but still the observations of Dr. Kennedy are sadly overloaded with an accumulation of theories which are almost as unsatisfactory, and fully as ill-timed, as are those with which nearly the entire bulk of Dr. Reed's volume is unnecessarily filled.

The aid required during the late period of doubt and anxiety by the great body of the profession, from those of their brother practitioners whose experience had rendered them well acquainted with the menaced disease, was that of plain and concise information with regard to the means which have been found most efficacious in averting or relieving attacks of Asiatic cholera, with clear instructions respecting those modes of treatment which the informants had themselves known either to have failed or to have been productive of decidedly injurious effects; these instructions being at the same time conveyed in such a manner as to shew that their authors had been at some pains to ascertain, either by actual observation during the prevalence of malignant cholera in this country some years back, or by cautious investigation and reasoning, the obscure but important shades of difference which exist between the pathological conditions of a pestilential fever as it occurs in the tropics, and the same disease as it is occasionally wont to appear in our colder regions, together with the modifications of treatment which would be indicated by the peculiar constitutions of the inhabitants of this country. Every physician is aware that the treatment which cures fevers in the tropics is not applicable to the fevers of this country, and that the constitutions of those who have long resided in hot climates differ as much from those of our own community as do the diatheses of the intemperate and cachectic artizans of our manufacturing towns from the constitutions of the robust and comparatively well-nourished labourers of the agricultural districts.

Nothing approaching to the desired course has been pursued either by Dr. Kennedy or Dr. Reed; the former having devoted his remarks on treatment wholly to the management of cholera as it occurs in India, and that, too, after rendering his really clear and practical instructions of somewhat doubtful value by a too elaborate introductory detail of the very questionable theories upon which they are based; the latter contenting himself with proffering some crude instructions which we do not perceive that he has ever himself adopted or seen employed with success by others in any single case of Asiatic cholera. With the respective *theories* of these gentlemen we shall not attempt to deal. The period of impending danger at which these works were placed before the profession was a time for action, not one moment of which ought to have been wasted in futile discussion; and, now that the menaced scourge has been providentially withheld, we feel content to wait for an explanation of the probable nature of pestilential fevers until a more extended investigation of the chemistry of the fluids and of the microscopic appearances of the solids has enabled physicians to trace out with greater accuracy than hitherto, the real *condition of the body while under the influence of this mysterious class of diseases.* It will be sufficient to say, that Dr. Kennedy's opinion with regard to the nature of cholera, and the main indications for its treatment, may be gained from the following sentences:—

> " 'There is a *somewhat* pressing on the vital functions,' " " and what that *somewhat* is I leave for those to speculate upon who can tell me what gout is, or what ague is," &c. " I consider a nervous derangement similar to concussion of the brain, to be the disease, how induced I know not, following the inexplicable shock sustained by the constitution, and the collapse and spasms to be symptomatic of the disorder of the brain; and finally, I consider the purging and vomiting to be no part of the disease, but the struggle and effort of nature to relieve the constitution, and cast off the noxious principle which is destroying it. For the treatment of such a disease, the indication is distinctly apparent—to relieve the brain by bleeding, and to induce the sanitary process of vomiting and purging where they do not exist, or to moderate them when violent." (pp. 56-7).

Dr. Reed commences his work by an elaborate citation of the various ancient and modern theories respecting the nature of fever, from which he draws the following very judicious conclusion:—" The result of the whole is, *that we know* little or nothing of the proximate cause of fever, or the means by which its phenomena are immediately produced," — an observation which appeared to give promise of an intention on the part of the author to treat his subject in a really practical manner,—a hope which was, however, dispelled when, in continuing our perusal of the work, we find the author unhesitatingly assigning certain " affections " and " irritations " of particular organs as the proximate causes of various kinds of fever, attributing " cerebral or nervous fever " to " affections of the brain and spinal marrow;" " bilious fever " to " especial irritation and its results of the mucous membrane of the biliary organs;" " adynanic (gastric) fever " to " a high degree of irritation, tending to disorganization of the mucous membranes of the abdominal viscera; " " catarrhal fever " to " irritation of the mucous membranes of the bronchia, lungs, and nasal organs," &c. &c. We pass over Dr. Reed's bare and unsatisfactory remarks on the treatment of fevers generally, and arrive at his observations on the treatment of epidemic yellow fever, typhus fever, plague, cholera, and sea-scurvy,—a set of diseases which the author is satisfied to class together, "as they all depend on a deficiency of oxygene in the blood," and which he therefore regards as indicating a plan of treatment which is calculated to replenish the deteriorated fluid with the said "oxygene." Among other less questionable means of supplying the lost "oxygene" to the system, the author rather infelicitously gives a very prominent position to the following specifics:—*calomel, muriatic acid, brandy, gin, and whisky!* Lest any of our chemical readers should be unacquainted with the precise action of these medicines as oxygenizing agents, we shall quote the author's perfectly original explanation of the modus operandi of calomel in restoring lost oxygen to the system:—

> "In the first place, calomel taken into the stomach is digested and carried into the circulating mass like other ingesta; it then, in the course of circulation, decomposes the water of the blood, appropriating to itself its hydrogen and part of its oxygene, becoming muriate of mercury,—a substance well known for its activity on the skin, kidneys, and liver; but the remaining" (?) "part of its oxygene enters into combination with the blood, converting it into a fluid capable of sustaining the operations of life, and of repairing the continual waste of the system." (p. 288).

We congratulate the author upon the above triumphant demonstration of the fallacy of the old prejudice which taught that "*ex nihilo nihil fit*," but recommend him to refrain from broaching his novel doctrines too hastily to the uninitiated, lest they share the early fate which so nearly blighted the discoveries of Galileo and Harvey! Seriously speaking, however, this paragraph leads to the supicion that Dr. R. is unacquainted with even the mere rudiments of chemistry. Still, there were two courses left open to him—either, in following old Lord Eldon's advice, to decide that calomel is a most useful remedy, without assigning any reason, or to procure a revision by some friend really acquainted with chemistry of his iatro-chemical hypotheses. He has adopted neither plan; and thus has exposed himself to the ridicule of the merest tyro in this science.

Although the passage which we have cited affords by no means a favourable idea of the general character of its contents, Dr. Kennedy's work is, upon the whole, one which affords much useful information respecting the cholera of India. The author might have been expected ere this to have laid aside much of the unsubstantial theoretical speculation which still occupies so large a space in his mind; but he is evidently a man of considerable experience. This may possibly also be the case with Dr. Reed, but we regret to say that it would be difficult to determine whether it is in the style, the opinions, or the facts, that his late production is most defective. His views on fever are as unsound as his speculations in chemistry are deplorable.

The Use of the Body in Relation to the Mind. By GEORGE MOORE, M.D. 8vo. pp. 431. London: Longman and Co. 1846.

DR. MOORE is already well known as the author of an interesting work "On the Power of the Soul over the Body," of which we have elsewhere had occasion to speak favourably.* That we had not over-estimated its merits, was proved by the volume very speedily reaching a second edition. The author appears to have struck out a new path in medical literature; and we must admit that he has succeeded in removing much of the abstruseness which is in general met with in psychological inquiries. The present volume is a continuation of the subject, and might be, perhaps, designated a treatise on medical metaphysics. It consists mainly of moral deductions from physiological facts, in which the theological relations of many branches of medical science are appropriately discussed. Our readers will judge of the nature of these essays from the table of contents:—On the nervous system in relation to sensation and will; life, irritability and sensibility; mental control; individuality and identity; materialism and development; the stages of life; the senses and their objects; the temperaments; food; fasting; the influence of exercise and air on the nervous system; sleep, disease, death, &c. Subjects of this kind, while they are of high interest, and, in some respects, of great practical value to the medical inquirer, do not all within the scope of treatises on physiology; and, if we except the late Dr. Abercrombie, scarcely any medical writer of repute has until now treated hem in a popular style. By the use f this term, we do not mean to say hat the scientific bearings of these nteresting questions are lost sight of: n the contrary, the author possesses he happy power of describing intricate ubjects in plain and simple language, o that his meaning can never fail to e understood. We do not agree with im in all things. For instance, it ppears to us that he is too favourably isposed to mesmerism; but his views n other subjects appear to us to be enerally sound, and free from objection. He has in some instances a very ummary way of dealing with new-ngled and eccentric medical docrines; as, for instance, in reference to he duality of the mind, he says:—

---

* For a review of this work, see vol. xxxi. p. 337.

> "It is as absurd to say, as some do, that here are two thinking beings because there re two brains, as it would be to say there re two agents because there are two instruments; but if mind or thought can be found o be secreted from the cerebrum like bile om the liver, then, indeed, minds may be ultiplied *ad libitum*, and every new consciousness is a new mind. Facts, however, emonstrate beyond controversy that the al brain has relation to a dual arrangeent of muscles and other organs of sensan and action." (p. 23).

He is opposed to the views of phreologists, but without displaying any itterness of feeling or personality. In eking for an extract which may cony an idea of the author's style, and the mode in which he deals with his bject, we do not know that we can better than select from the chapter Fasting the following passage, which plays one great source of the success quackery:—

> "Moderation in the use of food is a far ter remedy than medicine for an opssed state of the circulation, whether sing from disease or redundancy of supy. Fasting is the natural cure of replen; and it is a curious circumstance that tinence is so frequently forced upon se savage tribes who are addicted to ess; such as the American Indians and w Zealanders. Their diseases are but , except where they approach the cons of civilization, and in some measure pt those habits which nature has ren*ed uncongenial to them. Among civid nations, the use of purgatives is taking* the place of fasting; hence the success of quackery in the aperient department among the English and the Americans. We are an energetic people, and cannot be comfortable without abundant nourishment; but then, taking very refined food in large quantity, without sufficient intervals of abstinence, we find our brains and our bowels miserably sluggish, and then the pill-box supplies a handy sort of remedy for ills that common sense should have prevented. 'The peristaltic persuaders' of the gourmand are as essential to his happiness as his dinner; but not only do these gross livers need such help,—the exquisite poet must also resort to the apothecary to antidote the cook. Byron says: 'The thing that gives me the highest spirits is a dose of salts.' It diminished that congestion and irritability of his brain which his habits tended to keep up. He was at one period of his life epileptic; but he subdued the malady by extreme abstinence, frequently taking only vinegar and potatoes as his dinner. When he indulged in good living, and took stimulants, disorder of the brain returned in another form, and his temper became morose. It was then a dose of salts cheered him. Brisk purgatives often relieve melancholy; and that most powerful one, hellebore, was the ancient specific for this disease, which generally arises from congestion of the liver and bowels, causing an impure state of the blood. The frequency of a condition approaching to this is the secret of the demand for universal medicines in the shape of strong purgatives. Here is the evil: many good men, who read and think pretty much, and fancy they understand physiology because they have read about the blood, prove their ignorance of it by taking little exercise and dolefully mismanaging their stomachs. They forget that moderation in eating and drinking, as well as meditation, is a Christian duty, and that fresh air, cheerful society, and an occasional fast, would more effectually relieve the burdened viscera than a whole box of vegetable pills. Instances are not uncommon even among the highly but yet partially educated, in which some real malady has fixed upon the vitals, and those pills are swallowed in large quantities with manifest mischief. It is a matter of feeling, not of reasoning, with such persons. Their faith in the efficacy of the vaunted vegetables is grounded on ignorance, and confirmed by their sensations. Thus, I have known a consumptive patient of strong mind obstinately persist in taking the pills because they made him feel better, lighter, more cheerful, and more happy. Of course, argument falls dead before such facts. Thus, in such forlorn cases, diarrhœa and purgatives hasten on the fatal issue; but then, by

these means, the patients are kept just in that state which the highest degree of abstinence produces; their bodies waste and waste, but their souls are full of bright thoughts as long as exertion is avoided. The habit of their minds becomes exalted by holy reading, it may be, and there is not blood enough in their veins to excite their passions, or to call their passions into action: there is only just fuel enough to keep alive a clear flame until the fire burns quite out. Such patients feel brighter and brighter to the last, and the pills, say they, are the cause of it all. These are taken again and again; exhaustion proceeds, but they go on to feel better, that is, lighter; the body is no impediment, except from weakness; so they continue taking the pills, and feeling better and better, until they die." (p. 315).

We can assure our readers that this volume may be read with much profit and instruction in those intervals which can be spared from the toils of practice or from the study of more strictly professional works.

Proceedings of Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

December 8th.

DR. CHAMBERS, PRESIDENT.

Case of Disease and Stricture of the Intestinum Ileum. By JOHN ALLAN, Surgeon R.N.

[Communicated by T. OGIER WARD, M.D.]

THE subject of this case was a lady, aged 42, who, in the spring of 1837, suffered from influenza, with inflammation of the upper portion of the right lung. From that time she had frequent cough, and occasionally sputa streaked with blood. These symptoms recurred severely in September 1843, and, as there were profuse morning sweats, phthisis was feared, though the stethoscopic signs of that disease were not present. In the spring of 1844 she had frequently much flatulent and painful distension of the bowels, severe griping pains on the exhibition of purgatives, and, as these symptoms increased, those referrible to the chest greatly abated.

The pain caused by the collection of flatus in the bowels was very severe, producing vomiting, and great depression of strength. These attacks became gradually more severe, and the vomiting more frequent; and for the last two months of her life she vomi many times during the day. Vario remedies were used with a view of allayi the sickness, and relieving the pain in t bowels, but with only transient benefit. S died on February 4, 1846.

Inspectio cadaveris.—The lungs w healthy, except the upper part of the rig one, which was hardened, firmly adherent and full of tuberculous matter. The ilem was a little inflated, of a dark aspect, a very vascular. It was covered with numer black spots, which were found to be rings black, surrounding small whitish tubercles, not larger than mustard seeds. In thre places the mucous membrane was adherent to the other coats, and ulcerated internally. In five places the black spot encompass the bowel, and there all the coats were fir matted together into a hard gristly tex and the tube of the bowel contracted to t size of a quill. The mesenteric glands w not enlarged. The author remarks a worthy of notice, the arrest of the disease i the thorax upon that in the abdomen be coming predominant. The patient did n die hectic, but sank exhausted, from t stomach rejecting all nourishment from t period when the disease of the ileum had far progressed as to render the transmi of its contents impracticable.

Case of Fatal Internal Strangulation c by a Cord prolonged from a Diverticu of the Ileum, with Observations. T. B. CURLING, Lecturer on Surgery the London Hospital, &c.

Mr. T——, aged 53, of spare habit, subject to dyspepsia, residing at Camberwell after making a hearty supper on the even of Saturday, November 14th, suffered good deal from indigestion. Next morn whilst at chapel, he was seized suddenly w pain in the lower part of the abdomen. the evening he called at a chemist's, and a dose of the tincture of rhubarb, which rejected from the stomach on his way h He shortly afterwards obtained some p tive medicine, which was also reje Late at night he sent for his medical atten Mr. Lowe, of Aldersgate Street, who a nistered an injection, which brought a considerable quantity of hardened fæces, afforded a good deal of relief. In the co of the night, he took some efferv medicine, and pills of calomel and opium.

On the 16th he was unable to retain thing on the stomach, and, as the pa curred, by his wish the injection was peated; and it gave him relief as though very little feculent matter brought away. The pain and vomiting tinued to increase, and, towards night, accompanied with hiccup, and some of prostration. Some suspicion was tained of the existence of a hernia, and in the night the author was summoned to see him, in consultation with Mr. Lowe, and arrived at 3 A.M. His pulse was 75, with little power; he had an anxious countenance, and was suffering from severe remittent pains in the abdomen, and incessant vomiting. There was no tension of the abdomen, nor tenderness, except at a spot about two inches below the umbilicus, to which spot he referred his pains. Pressure at this part caused considerable uneasiness. No hernial swelling could be detected. Fourteen leeches were applied to the seat of pain; the patient was placed in a warm bath, and was ordered one grain of calomel and half a grain of opium every three hours. He was allowed to take beef-tea, wine and water, barley water, &c. but only a tea-spoonful at a time. The patient was much relieved by the leeching and bath; he became calm; the vomiting, hiccup, and pains ceased; and he thought himself better; but no stools passed. An injection was administered through a long tube in the course of the day. The calomel and opium were discontinued.

18th.—He passed a comfortable night. In consequence of a return of the pain and tenderness, Mr. Lowe applied a blister to the part affected. Some croton oil liniment was also rubbed over the abdomen. No stools.

19th.—The vomiting had entirely ceased, and the abdomen was still free from tension and tenderness, except at the spot below the navel. Collapse gradually ensued, and he died at half-past one A.M. on the 20th.

The body was examined thirty-eight hours after death. There were no marks of general peritonitis; merely slight serous effusion in the cavity. The small intestines were greatly distended. At the spot to which the pains were invariably referred, a portion of the lower part of the ileum, about seven inches in length, very tense, and of a dark colour, was found tightly strangulated by a long slender cord. The parts were removed for a more careful examination, when the cord was discovered to be composed of serous membrane, inclosing a little fat, which was prolonged from a diverticulum from the commencement of the ileum. This intestinal appendage was about four inches in length; at its origin it was about the size of the intestine, and, gradually diminishing, terminated in a cul-de-sac, from the extremity of which the cord was prolonged. The commencement of the cord was crossed and constricted, together with the intestine, by its terminal portion; and just below this spot it formed a dark bulbous swelling, composed of fat and congested vessels. The *cord was about four inches long*, and, after *forming a loop through which* the intestine *was strangulated, it spread out*, and became attached to the mesentery, near its root. The large intestine was quite empty.

The author remarks that this case affords an example of a very rare form of internal strangulation, and is an addition to a number of those cases in which no internal remedies are capable of affording relief. The best practical surgeons of the present day, he believes, entirely discountenance the proceeding once adopted by Dupuytren, of opening the abdomen at the supposed seat of obstruction, for the purpose of liberating the intestine. He has never, however, met with a case in which the symptoms, seat, and nature of the obstruction were so favourable for such an operation as in the one just related. The patient was a lean subject; the part strangulated was evidently small intestine; the pain and tenderness were confined throughout to one spot, and that directly beneath the linea alba; and there were no symptoms, even to the last, of peritoneal inflammation. At the post-mortem examination, the obstructed intestine was found precisely at the site anticipated, and not deeply seated in the cavity. The cause of obstruction was a slender cord, in which a trifling incision would have set the intestine free; and there were no marks of peritoneal inflammation, with the exception of deep congestion of the portion of intestine directly implicated.

The author states that the museum of the College of Surgeons contains a preparation closely resembling the morbid specimen just described; but there is no history of the case. He is also indebted to Mr. Paget for the reference to another similar case, of which the parts are preserved in the museum of St. Bartholomew's Hospital. In this case, the intestine was strangulated by a ring formed entirely by the diverticulum; whereas, in the case related in the paper, and in the preparation at the College of Surgeons, the constriction was produced chiefly by a cord prolonged from the extremity of the diverticulum. This cord, he believes with Mr. Paget, consists of the remains of the obliterated omphalo-mesenteric vessels. In conclusion, the author notices two cases of gastrotomy scccessfully performed, in cases of obstructed bowels, by surgeons in the United States.

Dr. Snow said that there were other cases besides those to which Mr. Curling had referred, of exactly the same nature as the one just related. In his paper on a case of strangulation of the ilium, read to the Society last session, he, (Dr. Snow,) had referred to a case related by M. Moscati in the "Memoires de l'Acad. Roy. de Chirurgie," which was, in every particular, even in the situation and dimensions of the parts, exactly like Mr. Curling's case; and he had been lately informed by Mr. Robert

Wade, that that gentleman once met with a fatal case of internal strangulation of the bowel by a fibrous band continued from an abnormal branch of the ilium, and attached by its other end to the mesentary. Although these cases were certainly rare, yet they formed a distinct class of internal strangulations, depending on a particular congenital malformation, which, as he (Dr. Snow) had stated in his paper, and as Mr. Curling had now stated, was a persistent state of the ductus omphalo-mesentericus. With respect to the question of operation in cases of strangulation by an internal band, the case he had related last session would not admit of it, for the patient had never been able to refer her pain to any spot in particular.

Mr. **Curling** replied that the case of M. Moscati had not escaped his memory; but in consequence of a wrong reference he had been unable to give an account of it.

Mr. **Bransby Cooper** requested an explanation of Mr. Curling as to the opinion expressed in the paper, that the case related was a good one for the operation of opening the abdominal cavity, with the view of removing the cause of the strangulation. He should be glad to know his reason, also, for concluding that the small, and not the large intestines, were the seat of the mischief.

Mr. **Curling** replied that he had not said that the case related was an excellent one for operation, but only that if an operation were to be performed in any case, this was the most favourable one for such a proceeding that he had ever seen. The reason why he had considered the obstruction to be situated in the small intestines, consisted in the fact of a fixed pain two inches below the umbilicus, which continued after the large intestines had been relieved. He was willing, however, to admit that there might still be a doubt as to the exact seat of the strangulation.

Mr. **Bransby Cooper** had made his inquiry because he believed a diagnostic mark of a certain character existed to point out the seat of the obstruction. He believed that what what was called "stercoraceous vomiting" never existed when the obstruction was in the large intestine. When the strangulation was below the ileo-colic valve, vomiting at all was rare, and stercoraceous vomiting never occurred.

Mr. **Curling** had never seen vomiting of fæculent matter in any case of obstruction either of the large or small intestine.

Mr. **Bransby Cooper** related the case of a man who was brought into Guy's Hospital with all the symptoms of strangulated hernia. He was very blue and collapsed, but there was no sickness; obstinate constipation had existed for two or three days. The man sunk, and, after death, a portion of small intestine was found strangulated by an adventitious cord passing from one portion of the mesentery to another. He stated that he had, in fourteen or fifteen cases, relieved the stricture in strangulated hernia without opening the sac, the proceeding being attended with no more inconvenience than the application of the taxis.

Dr. **Mayo** related the case of a patient who died in the Marylebone Infirmary from obstinate constipation, attended with vomiting of stercoraceous matter throughout. On examination after death, the rectum was found to be so constricted that it would not allow of the passage of a crow-quill, the coats of the intestine being so remarkably thickened. No other kind of disease was present. Dr. Mayo threw out a suggestion, that in cases of obstruction, it was desirable, in the first instance, not to give purgatives of a flatulent character, in order to allow the bowel an opportunity of returning to its proper position.

Mr. **Bossy** related the case of a man who was the subject of inguinal hernia. When the bowel was up he was in pain, but if it were down, he was easy. One morning the hernia did not descend, and he was seized with vomiting and all the symptoms of strangulation. No hernia could be detected, and the man died. On examination, a band was found arising from the root of the mesentery, and attached just above the opening of the inguinal canal, so that when the intestine passed up, a portion of it, to the extent of twelve inches, became strangulated.

Mr. **Lloyd** had seen many instances of obstruction to the large intestines, in which there was vomiting of stercoraceous matter. A fatal case had recently occurred to him, in which this kind of vomiting was present to a remarkable extent. A tumor was found at the upper part of the colon. In another case, in which stercoraceous vomiting was a marked symptom, constriction was found at the upper part of the rectum, arising from induration and thickening of all the surrounding tissues. In hernia of the large intestine he had seen vomiting as urgent as when the strangulation was situated in the small intestines.

Mr. **Bransby Cooper** had confined his observations, in reference to the presence of stercoraceous vomiting as a diagnostic mark of the situation of obstruction, to acute cases.

Dr. **Mayo** briefly alluded to a case of an acute kind, in which stercoraceous vomiting existed for several days, and was terminated by the expulsion of a calculus by active pressure. The calculus had been the cause of the obstruction.

Mr. **Arnott** said that much depended upon what was meant by stercoraceous vomiting. He regarded the matter called fæcal or stercoraceous, as that yellowish fluid with a fæcal smell, similar to that found the small intestines. He agreed with Mr. Cooper to some extent, and related the case of a child with imperforate rectum, whose parents would not consent to an opening being made in the gut. The infant lived for seven weeks and three days. For three days there was stercoraceous vomiting, but none afterwards. The rectum and sigmoid flexure of the colon were full of fæcal matter, so that only the contents of the small intestines had been thrown out.

Mr. Solly inquired whether the surgeon in any case was justified in cutting into the abdominal cavity to relieve internal stricture? Some of these cases depended on the presence of a simple band passing from the mesentery to the colon and confining the small intestines, so that one nick of the knife would instantly remove the cause of obstruction.

Mr. Lloyd had seen several cases of imperforate rectum, in which the children have lived for six, seven, eight, and even nine weeks.

Mr. Brooke concurred with Mr. Solly, that the Society had, in their discussion on this interesting case, lost sight of the most important practical point—namely, under what, if under any circumstances, a free incision into, and exploration of, the peritoneal cavity, might be deemed a justifiable operation. He feared that the situation of the lesion being distinctly pointed out by symptoms during life, as in Mr. Curling's case, must be viewed as the exception rather than the rule; as in most cases of the kind that were on record, the patient suffered so much from general distension of the intestine by flatus, as to be unable to point out any especial seat of pain. A case of internal obstruction had occurred in his own practice some years since:—A coachman, after eating a hearty supper, was seized in the night with considerable pain in the abdomen, a little to the left of the umbilicus, at which point there was, on the next day, tenderness on deep pressure, but not superficially. The usual remedies were exhibited without effect; stercoraceous vomiting, prostration, and all the ordinary symptoms of strangulated hernia, supervened, and the patient died after five or six days. For the last two days, he suffered little either from pain or tenderness, the point of obstruction having probably been relieved by the inverted peristaltic action. On a post-mortem examination at the precise spot indicated during life, a loop of small intestine, about three inches long, was found to have slipped under an epiploic appendage, the end of which was adherent to a neighbouring point of the mesentery, the passage being thus obstructed without strangulation. He had been enabled, by the symptoms, to form so correct a *diagnosis in this case, that had he then been aware of the immunity with which, under judicious precautions, the peritoneal* cavity may be freely opened, and its contents submitted to a considerable degree of manipulation, as demonstrated by the many invariably successful operations performed by Dr. F. Bird for the removal of ovarian tumors, he would certainly have subjected the patient to the, at best, precarious remedy of an exploring operation.

Mr. Bowman concurred with Mr. B. Cooper respecting the diagnostic mark as to the seat of obstruction. He related a case of internal strangulation, in which an exploratory operation was performed, by an incision being made a little to one side of the linea semilunaris. There was little or no local pain to indicate the seat of obstruction, but there was slight fulness and tenderness over the right side, above the groin. The obstruction was not found, but it was thought by the operator that if he had opened the abdomen at the linea alba instead of at the linea semilunaris, the cord, which, after death, was discovered to extend from a diverticulum of the small intestines to the umbilicus, and which covered the strangulation, might have been met with, and the patient relieved.

Dr. Ogier Ward said that we ought to pause before we resorted to so dangerous an operation as opening the cavity of the peritonæum in search of the cause of a strangulation or other lesion producing its symptoms; as he did not believe that our diagnosis of those affections was sufficiently established to authorize such a proceeding; and in proof, he mentioned, that it had fallen within his limited experience to have witnessed two fatal cases of this kind within the space of three months, both arising from fibrous tumors within the cavity of the intestine, and of course not to be removed by any warrantable operation, even though the intussusception they produced might have been relieved by it.

Mr. Charles Hawkins regarded the question of operation in these cases as one of the greatest importance. He had seen a case, two years since, in which he thought an operation would have been justifiable. A young woman, 20 years of age, suffered for two days with all the symptoms of strangulated hernia, without the presence of any external tumor. All the remedies employed failed to benefit her, and after death a small knuckle of intestine was found strangulated by a loop of adventitious membrane, the result of a former inflammation. Had an exploratory operation been performed in this case, the patient would have been easily relieved.

Dr. Copland thought the operation might be attempted in some cases. With respect to the locality of the obstruction, there would generally be found greater tenderness at one point than another, and on careful percussion the obstructed point would be found to be duller than the rest of the abdomen. He did not think an exploratory operation would be attended with more difficulty or danger than the removal of an ovarian tumor, and as we know that the case must terminate fatally, we should do better by attempting this than by doing nothing.

The next meeting of the Society will be held on Tuesday, January 12th, 1847.

PATHOLOGICAL SOCIETY OF LONDON.

December 7th, 1846.

Dr. Williams in the Chair.

Mr. Ebenezer Smith exhibited a fœtal heart, presenting

Premature Occlusion of the Foramen Ovale — Diseased mitral valve — Contracted left heart — Large pulmonary artery and duct.

The preparation was accompanied with diagrams. The following is the history connected with the case:—

A small infant, the seventh of healthy children by the same parents, was born on Oct. 20th, 1846. His mother had noticed unnatural quietude during the last three months of gestation. Its birth was natural, the head, body, and limbs, well developed, and of the usual colour, till, in about five minutes after it first breathed, its face became dark blue, and the respiration difficult. The ligature on the umbilical cord was untied, but no blood flowed; the skin soon became similarly blue, and the respiration very difficult and irregular: the heart beat about 130 in a minute, clearly and strongly. The temperature appeared natural. In eight or ten hours apoplexy came on, the cyanosis being universal, the right arm paralysed, and the left convulsively contracted. In sixteen hours the child was perfectly comatose, and died twenty-one hours after birth.

Inspection, twenty-four hours after death.—The body full grown, well proportioned; skin marbled with large dark and white patches; pericardium contained two or three drachms of serum; the lungs about the usual size, full of dark blood, slightly emphysematous anteriorly; the liver appeared healthy; umbilical vein pervious and empty; venæ cavæ capacious; heart rather more vertical than natural, smaller and narrower in consequence of flatness of the left ventricle: both venæ cavæ, the right heart, and coronary veins, engorged. On opening the right auricle, which was distended, and of the usual form, the fossa ovali was seen in its natural position, but closed by a strong reticulated membrane firmly attached to its distinct annulus, impervious and pouched. A probe could be passed down to the left three lines into a considerable impervious inter-auricular fossa. Below the fossa ovalis, a mere vestige of the Eustachian valve; valves of the coronary vein distinct; the right auriculo-ventricular opening large, patent, and furnished with a very good valve, differing in form from the usual shape of the tricuspid, but with distinct *fixed* and distension columns and curtains, and moderator bands, as demonstrated by Mr. Wilkinson King; walls of the right ventricle rather hypertrophied, the cavity being large, and not only descending to the apex, but curving round the left ventricle, so as alone to form the apex of the heart: no inter-ventricular communication whatever. The pulmonary artery very large, and three and half lines wide at its origin. A little above its origin, more than four lines: its valves being perfect. It gave off, in the usual situation, branches to the right and left lung, and was then continued perpendicularly upwards, in a scarcely diminishing trunk, the ductus arteriosus to the under surface of the aortic arch, nearly opposite the left subclavian, so that the blood from it would flow, not only into the descending aorta, but upwards, and somewhat contrary to its previous direction, into the arteries of the head and arms. The four pulmonary veins entered the left auricle as usual. This cavity was well developed, being wide transversely, and constricted vertically, having a very large muscular appendage. The complete membrane covering the fossa ovalis was here *also* quite distinct and impervious, and could be readily pushed towards the right auricle: the auriculo-ventricular opening extremely contracted, being but one line and a half in diameter. The mitral valve altogether defective in structure, and seemed to have been faulty in action: it consisted of two very small, whitish, tendinous bands, fixed, the one to the septum, in front, the other to the posterior wall of the ventricle, without any curtains or fleshy bands, which, it seemed, could not have been opposed so as to prevent the reflux of the blood into the auricle. The left ventricle almost obliterated; its walls contracted on a small cavity at the base, not exceeding two or three lines in diameter, lined by a very dense, smooth membrane. The aortic opening also much contracted, being about two lines wide; the sigmoid valves perfect; the aorta itself normal in its course, giving off normal branches, but the ascending and transverse portion of the arch considerably smaller than the pulmonary artery, measuring, at its origin, three lines in diameter, and opposite the left carotid, just before receiving the arterial duct, two lines and a quarter: the descending aorta, after receiving the arterial duct, measuring two lines and three-quarters. The arterial duct continued almost perpendicularly upwards into a large trunk, to nearly opposite the left subclavian.

Thus, during the life of the child "in utero," the systemic circulation was maintained by the increased development and perfect mechanism of the right heart and vessels, notwithstanding the useless mitral valve, the arrested development of the left heart and aorta, and the strongly closed foramen ovale. On the assumption, however, by the lungs, of their proper action, the quantity of blood received by them was obstructed in its return by the defective mitral valve, &c., respiration became embarrassed, the free circulation of blood in the brain impeded, and death from apoplexy resulted. Mr. Smith remarked that two points of especial interest arose out of this example of malformation of the heart. The first was,—Which was the primary cause? Did the premature closure of the foramen ovale increase the activity of the right heart and vessels, so as to carry on the circulation of the system, and arrest the development of the left heart, and particularly the mitral valve? Or, was the diseased action first manifested in the mitral valve, which, producing an utterly defective valvular structure, stayed the blood in its course through the left heart, and presuming the valve of Botal to be early and well developed, thereby pressed that valve against its margin, so as to cause its firm occlusion?

Judging from what appeared to be merely the vertigiform structure of the mitral valve, and from indications that the left auricle had been once more capacious, and had subsequently become constricted, Mr. Smith inferred that at about the fifth month the mitral valve became inadequate to the systemic heart of the growing fœtus, obstruction and embarrassment followed, so as to produce *astasis* of blood in the left cavities; increased energy, perhaps inflammation of these structures ensued, which resulted in a closure of the foramen ovale. The ductus arteriosus being open, the energies of the right heart produced so perfect a development of its parts and connected vessels, as to maintain the systemic circulation; and hence, the left heart and ascending aorta being comparatively useless, contracted in their size. This view of the state of the left heart, exclusive, however, of the condition of the mitral valve, he thought was consistent with the other theory, — that premature closure of the foramen ovale was the first link in the chain of morbid occurrences.

The second point, as urged by Dr. *Norman Chevers, "That a closed foramen ovale* is not a proof in jurisprudence that a child has lived;" for in this case the occlusion must have existed long before birth. The preparation is deposited in the museum of Guy's Hospital.

Dr. PEACOCK exhibited three specimens of

Malformation of the Heart.

In the first case, there existed extreme contraction of the orifice of the pulmonary artery, with a deficiency in the interventricular septum, and the aorta arose in chief part from the right ventricle. The right auricle and ventricle were of large size, and the walls of the latter thick and very firm. The left ventricle was, on the contrary, small, and its walls thin and flaccid. The left auricle was also small. The foramen ovale and ductus arteriosus were both closed. The heart was taken from a child two years and five months old, who had exhibited well-marked symptoms of cyanosis, which commenced three months after birth. Dr. Peacock remarked, that though the cases are numerous in which, with more or less contraction of the orifice of the pulmonary artery, the septum of the ventricles was deficient, it is far from frequent to meet with these malformations, with, as in this case, a closed state of the foramen ovale; and especially so when there is great contraction of the pulmonary artery.

The second case was one in which the only departure from healthy conformation of the heart consisted in the small size of the arteries distributed to the lungs; in consequence of which, the trunk and orifice of the pulmonary artery and the right ventricle were unusually large, and the foreamen ovale imperfectly closed; the left ventricle and aorta being small. The heart was taken from a child ten weeks, which had displayed slight cyanosis during life.

The third specimen was a heart taken from a girl of ten or eleven years of age, with whose history Dr. Peacock was unacquainted. The interesting points in this case were, first, a deficiency of the base of the interauricular septum, with a perfect closure of the foramen ovale. The deficient space allowed of free communication between the two auricles, so that there could only be said to be one auriculo-ventricular aperture; 2dly, a distinctly tricuspid form of the left auriculo-ventricular valve; and, 3dly, a deficiency at the base of the septum of the ventricles, closed by an extension of the anterior fold of the left auriculo-ventricular valve, and the subsequent expansion of this membrane into a small sac, having an aperture communicating with the cavity of the right auricle. Dr. Peacock suggested that had this patient survived a few years longer the sac and the opening into the auricles would doubtless have enlarged, and have assumed, both in the symptoms during life and the appearances after death, a very close resemblance to a true aneurism of the undefended space of the base of the ventricular septum, which had opened into the right auricle.

Mr. **Crisp** exhibited

Two Specimens of Diseased Heart.

The first Mr. Crisp believed to be one of "concentric hypertrophy of the left ventricles." The specimen was taken from a woman aged seventy-nine. She was only seen twice before death, and then appeared to be in great pain, but, owing to mental imbecility, was unable to describe her symptoms.

Nothing remarkable was observed about the thoracic or abdominal viscera, the thoracic aorta and branches being more than usually healthy. The abdominal aorta, for three inches above its bifurcation, was converted into a firm bony cylinder; the right internal iliac nearly impervious from ossific deposit; the left less ossified; the common and internal iliacs were tolerably healthy. In the lower part of the thoracic aorta was a dense fibrinous coagulum, occupying the calibre of the vessel, but not adhering to its sides: it was composed principally of fibrin, with a few blood globules.

Case 2.—The patient from whom this heart was taken first came under Mr. Crisp's care in April 1841, when he was 56 years of age. His health before this period had been tolerably good, with the exception of slight attacks of difficulty of breathing. (His father died suddenly of angina pectoris at the age of 55). At that time he suffered from great difficulty of breathing, which came on suddenly; pain and sense of oppression at the præcordia; pulse irregular; heart's sounds normal, but its impulse increased; pain in the left arm, extending to the elbow, and sometimes affecting the little and ring fingers; he had also violent pain in the epigastrium, so as to induce him to suppose that he was passing gall-stones, although none could be discovered in the evacuations. These symptoms continued for several days. He was bled from the arm; leeches and fomentations were applied to the side, and small doses of mercury given, so as slightly to affect the gums. He gradually improved in health, and was able to resume his usual avocations; he suffered, however, from frequent attacks of angina pectoris, and the pain in the left arm and fingers was at times very severe, lasting occasionally for four or five days. Latterly he had had pain also in the right arm and shoulder. About eighteen months since, he suffered from acute pain in the left side, and a few days afterwards a small calculus was voided with the urine. Of late, his health had been better than usual.

Three days before his death he complained of excruciating pain in the left arm and little finger, which was somewhat relieved by warm applications; but it soon returned. He also complained of a sense of oppression in the region of the heart "as if (to use his own expression) the heart had been bound down." (The pain and oppression varied in severity, but continued more or less to the time of his death). The pulse was about the same as usual, except during the acute attacks of pain, when it was quickened, and less bounding. He retired to bed about half-past 10 on the night previous to his death, slept for five or six hours, and in the morning expressed himself easier than he had been for two or three days. He was able to dress and shave himself, and walk down stairs; and, whilst in the act of getting his breakfast, his head suddenly fell forward, and he died instantaneously.

Examination, twenty-two hours after death.—Body warm; blood fluid; face very pallid; great abundance of fat, about three inches in thickness, on the abdominal parietes.—*Chest:* Numerous pleuritic adhesions on the left side; both lungs gorged with black blood, especially the left; but the blood was confined to its proper vessels. The heart was large and flabby (weight about 14 ounces); both the coronary arteries were ossified in various parts: in some places so as to form a bony cylinder; the left ventricle dilated; both auriculo-ventricular openings large, but the *mitral* and tricuspid valves appeared to have performed their proper functions. The aorta of its usual calibre, but it contained numerous elevated patches of cartilaginous and atheromatous deposit, as well as three bony plates: its colour natural. Liver large, but its structure apparently healthy; the gall-bladder filled with calculi, and its duct impervious (as in the case which was related to this Society by Mr. Crisp a few weeks since). Right kidney double its natural size; left, small: pelvis of both congested; the right contained a small phosphatic calculus; brain not examined.

Dr. F. H. **Ramsbotham** presented

An Infant's Heart, possessing only One Auricle and One Ventricle.

It was situated in its natural position in the chest. The auricle was separated from the ventricle by tendinous valves. There was only one artery—the aorta—arising from the ventricle, which sent off a vessel in the direction of the ductus arteriosus. This artery divided into two branches, which supplied the lungs. The venæ cavæ and the two right pulmonary veins entered the auricle in their ordinary positions and directions, the pulmonary veins of the left side forming one common trunk before their termination in the auricle. The vena cava inferior, however, had been destroyed by opening the auricle; and the branch passing from the aorta, which divided into the pulmonary arteries, had unfortunately been cut away in removing the heart from the body.

The child was of full time, well developed, and lived ten days. The late Dr. Combe, who attended it during its short life, stated that cyanosis was perfect over the whole body, but that neither the respiration, temperature, nor muscular action, were materially affected. This preparation is mentioned by Dr. Farre, in his work on the "Malformations of the Human Heart;" and a detailed description of it, accompanied by two figures, is given in the 95th volume of the *Philosophical Transactions*, at page 228.

Mr. PARTRIDGE exhibited the three following specimens:—

The Pelvis of an Old Woman,

whose body was brought for dissection to King's College. No history of the case could be obtained.

The preparation shewed a crural hernia situated external to the femoral vessels: that is, in the place where a psoas abscess usually points in the thigh.

The hernia, which was double, one existing on each side, was evidently formed by a protrusion of that thin part of the fascia iliaca which is situated above the crescentic margin of the same fascia, which is connected with and strengthened by the offshoot from the outer margin of the psoas parvus tendon. The hernia had the usual peritonæal sac formed of the peritonæum, covering the iliac fossa, and it had extended underneath Poupart's ligament, along the surface of the iliacus internus muscle. into the thigh. On the right side, the rupture contained the appendix vermiformis and the cæcum; on the left side, a part of the sigmoid flexure of the colon. The left rupture was readily reducible; that on the right side incompletely so, as the appendix veamiformis still remained in the sac. Such a rupture, Mr. Partridge remarked, was very rare, if not unique, and might readily be mistaken for psoas abscess.

A very much Enlarged and Thickened Bursa, removed from underneath the Fascial Insertion of the Gluteus Maximus in a Middle-Aged Man.

The bursa was of several years' growth: it burrowed so completely beneath the tendon of the gluteus that some of the fibres of that muscle were necessarily *divided in* the *operation for the removal of the tumor.* The tumor was first tapped, and, its nature being surmised, it was removed by a large T-shaped crucial incision. The sac of the tumor contained some serum, and abounded in albuminous bodies.

Preparation taken from a man, aged 57, who cut his throat with a razor.

There was not much bleeding, except immediately after the wound. The instrument had passed between the cricoid and thyroid cartilages, and cut obliquely quite through the cricoid, leaving at the upper part of the wound that portion of this cartilage upon which the arytenoid cartilages rest. Though the cricoid cartilage was quite divided, the pharynx was not laid open, and consequently the patient could swallow with perfect facility. The voice was impaired, though the cordæ vocales and sacculi laryngis remained intact at the upper part of the wound. No main artery was divided. The patient sank on the day following the injury.

Mr. BUSK exhibited three specimens, the first being

Kidney affected with Tubercles.

It was taken from a patient, aged 52, admitted into the Dreadnought, suffering from bronchitis, without any apparent affection of the kidneys or the liver. The patient died in a few days.

In the post-mortem inspection, miliary tubercles pervaded both lungs, which also presented evidence of extensive bronchitis. The left kidney contained a large quantity of serous cysts, its ureter being ten times its ordinary size, and at its entrance into the bladder was almost occluded, admitting only a bristle. The cause of the dilatation was not obvious. The right kidney was studded with small white points, consisting, in the opinion of Mr. Busk, of tubercular matter. The bladder presented one or two superficial ulcers. The liver contained a large cyst, containing hydatids, some of which were very large, others not greater than a pin's head.

Second, a specimen of

Stricture of the Rectum,

taken from a boy, aged 16, who had died from acute peritonitis. The stricture was situate about three or four inches from the anus; was very tight with ulceration of the mucous membrane, and which had arisen from a large deposit of medullary sarcoma, external to the muscular fibres of the gut.

Third, a specimen of the

Filaria Medinensis,

taken from beneath the skin of the leg of a man in the Dreadnought Hospital.

The meeting then adjourned to December 21st, at 8 o'clock P.M.

WESTMINSTER MEDICAL SOCIETY.

Mr. Hancock, President.

Saturday, Nov. 28, 1846.

Dr. William Merriman read a paper on

Inversion of the Uterus.

He first described a case of partial inversion of eight years' standing, seen by his father recently, and which apparently admitted of no effectual relief, although the sufferings of the patient had been, and must continue to be, very great. He then propounded several questions to the Society—whether, in cases of partial inversion, where reduction is found impossible, the fundus of the uterus should be pulled through the os uteri, so as completely to invert it, and thus enable the os to contract upon as small a substance as possible; whether pulling at the funis, or a natural intus-susception, be the most frequent cause of inversion; whether Nature has ever, as is asserted, reduced the inversion by some unknown and gradual reaction; whether the discovery of plicæ or small wrinkles in the mucous membrane, at the part where the uterus turns upon itself, can be considered as symptomatic of inversion, as contra-distinguished from polypus; and, lastly, how long a period may elapse before reduction becomes impossible, allusion being made to a case published by Mr. Radford, of Manchester, in which reduction was effected, after several days, in the short space of fifteen minutes.

Mr. **Hancock** inquired if, in the case related, the inversion was produced by traction on the funis.

Dr. **Merriman** did not know.

Mr. **Brooke** referred to a case related by Mr. Newman, and spoken of in the paper. The subject of that case had afterwards come under his (Mr. Brooke's) treatment for another disease. He believed that in that case the inversion was caused by traction on the funis, and the inverted uterus was at first mistaken for a polypus.

Mr. **Hird** related a case of inverted uterus which he had witnessed when a pupil. The child was propelled to the floor, whilst the mother, a young woman in her first labour, was in the upright position. She fell suddenly into a state of collapse, and, on Mr. Hird's arrival, he found the inverted uterus projecting, with the placenta attached to it. A medical practitioner who arrived, immediately separated the placenta and replaced the uterus without difficulty, but the patient died in two hours, apparently from the shock, as there was no great hæmorrhage. The cause of inversion of the uterus was in a great measure undetermined; for although in some cases, as in that he had related, there might be dragging by the cord, in others there was neither unusual shortness nor a twisted state of the funis, nor was traction applied to it. There was a difference of opinion as to whether the placenta should be stripped off from the uterus when still attached, or whether the reduction should be first attempted with the placenta adherent. It was recommended to leave the placenta attached during the reduction, more particularly when it was partially detached, for fear of increasing the hæmorrhage by its entire removal. There was this objection to removing a uterus which had been long inverted by ligature—that it was stated sometimes to contain a portion of intestine.

Mr. **Curtis** said, that if such were the case, it would become soon apparent by symptoms of strangulation coming on, and the ligature might be divided.

Dr. F. **Bird** considered that the funis was not strong enough to bear the traction necessary to cause inversion of the uterus; he therefore believed that it resulted from irregular contraction. He considered that it was best to return it without separating the placenta.

Dr. **Bowman** should prefer to remove the placenta before attempting the reduction, even if it were partly detached, because he had remarked, in some cases of placental presentation which he had witnessed, that the hæmorrhage which existed while the placenta was partially detached, ceased as soon as it was entirely separated, according to the plan pursued by Mr. Simpson. He believed, with that gentleman, that the placenta, when partially detached, acted like a sponge, receiving blood from the uterus by its adherent part, and allowing it to escape by the part which was separated.

Dr. **Chowne** objected to the plan of treating placenta prævia as recommended by Dr. Simpson, and stated his grounds of objection. With respect to inversion of the uterus, he considered that the funis, in most instances, would rather break than be the means by which the uterus could be inverted; but that in other cases, in which the uterus was thin, flaccid, and inclined to invert itself, traction by the funis might determine that event.

Correspondence.

THE INFLUENCE OF AGE ON MORTALITY AS WELL IN THE METROPOLITAN AS THE RURAL POPULATION.

Sir,—Statistical conclusions based upon a limited number of facts are frequently fallacious, and therefore prove of little benefit either to the physician or political economist; but deduced from an extensive series of tables, properly arranged, the deductions approximate so near the truth, that they constitute very good guides for the medical practitioner to follow, when giving an opinion respecting the prognosis of particular diseases. This is one of the reasons why the Registrar-General's Annual Reports become valuable documents, especially to the profession; and, as much practical information may be extracted from the volume recently published, I trust no apology is necessary in again resuming the subject, although it has been already amply discussed in previous communications inserted in your journal.

Considering it would be instructive to ascertain whether the *age* of patients when suffering from disease has any influence on the rate of mortality, I have, with the view of obtaining data for such an investigation, constructed the two following tables, excluding, however, from both all children dying under five years of age, as it is not intended to discuss infantile diseases in the present observations. On the other hand, as it will be useful to contrast and compare the results observed amongst the inhabitants of so densely crowded a place as London with those occurring in the country, I have placed in juxta-position the total deaths reported from seven different maladies prevalent in the metropolis during 1843, with those observed in the south-eastern or Kent district. This selection was made on account of both localities being contiguous, similar in climate, and of nearly the same physical attributes in respect of soil and seasons, and also as the first is inhabited principally by mechanics, tradesmen, and persons engaged in manufactures or sedentary occupations, including those who pass their time in idleness or dissipation; whereas the other district chiefly comprises an agricultural or rural population.

TABLE I.—*Deaths of Males, 5 years and upwards, during* 1843, *in Metropolis (Pop.* 878,767) *and in Kent District (Pop.* 232,228).

Disease.	Total Deaths.	Maximum of Age.	Died at that Age.
Typhus . . .	Town 947	20 to 30	157 or 14·47 per cent.
	Country 233	10 to 20	54 or 23·17 ,,
Phthisis . . .	Town 3287	20 to 30	836 or 25·46 ,,
	Country 628	15 to 25	202 or 32·16 ,,
Pneumonia . .	Town 535	40 to 50	107 or 20 ,,
	Country 97	45 to 55	19 or 19·58 ,,
Cancer . . .	Town 106	40 to 50	36 or 33·96 ,,
	Country 27	55 to 65	11 or 40·74 ,,
Dropsy . . .	Town 607	50 to 60	132 or 21·91 ,,
	Country 171	60 to 70	45 or 26·31 ,,
Apoplexy . . .	Town 421	50 to 60	111 or 26·30 ,,
	Country 142	60 to 70	53 or 37·32 ,,
Paralysis . . .	Town 423	50 to 60	125 or 29·55 ,,
	Country 98	60 to 70	32 or 32·65 ,,

TABLE II.—*Deaths of Females, 5 years and upwards, during* 1843, *in Metropolis (Pop.* 996,726) *and in Kent District (Pop.* 236,885).

Disease.	Total Deaths.	Maximum of Age.	Died at that Age.
Typhus . . .	Town 851	10 to 20	214 or 25·26 per cent.
	Country 191	5 to 15	78 or 40·83 ,,
Phthisis . . .	Town 2854	10 to 20	979 or 35 ,,
	Country 696	15 to 25	214 or 30·74 ,,
Pneumonia . .	Town 523	50 to 60	78 or 14·91 ,,
	Country 68	50 to 60	14 or 20·58 ,,
Cancer . . .	Town 394	30 to 40	120 or 30·45 ,,
	Country 76	50 to 60	27 or 35·52 ,,
Dropsy . . .	Town 860	50 to 60	194 or 22·55 ,,
	Country 188	65 to 75	53 or 28·45 ,,
Apoplexy . . .	Town 441	50 to 60	134 or 30·38 ,,
	Country 97	50 to 60	25 or 25·77 ,,
Paralysis . . .	Town 423	50 to 60	121 or 28·60 ,,
	Country 81	55 to 65	24 or 29·62 ,,

According to the preceding tables, typhus appears to have been most fatal to males living in the metropolis between the age of 20 and 30; whereas amongst females in the same locality the largest proportion were carried off by that complaint at an earlier period: viz. from 10 to 20 years of age. In the Kent or rural district, the age at which typhus proved most fatal was even earlier, both to males and females, than in the metropolis, as it ranged from 10 to 20 in males, and from 5 to 15 in females. With respect to phthisis, the tables shew that this malady proved most fatal to females living in the metropolis at an earlier period of life than to males; the former being from the 10th to the 20th year, and in the latter from the 20th to the 30th year, when more males died in London than at any other age. But amongst the rural population consumption proved equally destructive to both sexes about the same period of life: viz. from 15 to 25 years of age. As it would be superfluous to examine the different deviations of the above tables, seeing the reader may do so at his leisure, I will only now allude to cancer, which proved most fatal to females resident in town from the age of 30 to 40, and in the country, to the same sex, from 50 to 60; whereas amongst males in the metropolis this malignant disease was most destructive at the age of 40 to 50, but from 55 to 65 to those resident in the country. Guided by the data now detailed, medical practitioners perceive that at certain periods of life particular diseases are more likely to prove of a serious character than they would at other ages of even the same patients; consequently, individuals having, for instance, a predisposition to apoplexy or paralysis ought to be much more careful to avoid exposure when approaching their 60th year, to causes likely to induce such maladies. At the same time, wherever any hereditary tendency to consumption prevails in a family, the offspring of that union cannot be too zealous in counteracting or alleviating even the first symptoms indicative of pectoral disease in early life, more especially if occurring in females soon after puberty, whether inhabiting the town or country.

Respecting the influence which old age produces on mortality, it appears that more females are carried off by this cause than males, as well in the metropolitan districts as in the provincial; thereby proving the fact that more women attain an advanced age in this country than men, whilst the aggregate number of deaths in men exceed those amongst the female sex during the middle period of life. In support of this doctrine, the Report shews that the deaths of males in the metropolitan districts from old age during 1843 amounted to 1368, of whom 64 were 90 years old and upwards; whereas the females enumerated in the same category were 2173, 123 individuals being 90 and upwards. The same peculiarity occurred in the Kent district, where the total males that died amounted to 476, of whom 31 had passed their 90th year; but the deaths of females similarly classified were 552, 58 of these being 90 years old and upwards. In further illustration of this point, it should be stated that about the middle period of life, or from 50 to 60, 1985 males died in the metropolis from all diseases during 1843, whilst only 1614 females are reported to have died under similar circumstances, notwithstanding the female exceeds the male population of London. The same result was observed throughout the provincial districts, in which 9077 males between the age of 50 and 60 died from all causes, and only 8555 females. Amongst persons attaining the utmost limits of existence, the contrary, however, prevails respecting the female sex, not only in town, but in the country generally: since 3 males and 6 females 100 years old and upwards died in the metropolitan districts during 1840, at the same time that 45 males and 77 females were reported in the provincial districts of England and Wales as dying at equally advanced ages, which would make, if calculated according to the scale of population, about double the number of those met with in London. In corroboration of this opinion, besides being of itself an interesting fact, it should be mentioned that the oldest individual of all recorded amongst the deaths in North Britain during 1840, was a female who had actually passed her 110th year, and resided in the eastern part of the county of Northumberland.

MEDICUS.

Dec. 12, 1846.

⁂ We trust our correspondent will continue his useful analysis of the Registrar-General's Report. In judging of the relative mortality at different ages and in the two sexes, it is always important to bear in mind the difference in the number of the sexes living at different ages.

ON THE TYPHUS FEVER IN BERKSHIRE.

SIR,—Very little has yet been said with regard to the great increase of typhus fever, and the tables of mortality do not seem to shew that it exists to any great extent.

I was prevented last week sending you an account of its prevalence in Berkshire; and in the meantime I see there has been copied from the papers into this week's GAZETTE* an exaggerated account of this fever at Upton.

---

* From the Times.

The writer there states that the fever has only existed for the space of one month, and that, out of a population of 130 persons, 32 had died, which is about 22 per cent., or more than $\frac{1}{5}$. Now the population of Upton is 240, and out of this number not more than 23 have died, which is about 9 per cent., or $\frac{1}{11}$; moreover, the fever has been raging for four months. The writer goes on to state that all this results from the remoteness of the place, and from the want of medical attendance. This is not true, for there are two medical men in Upton almost every day, and the fever is just as bad in places where this plea cannot be urged.

The real causes, however, of the great mortality may be traced without much difficulty, and we need not go abroad to look for them in the forest, when they may be found at home at the very threshold, for they exist in the dilapidated and wretched state of the cottages, which subjects the inhabitants to cold and damp; also in the scarcity of food which always prevails among the poor when the harvesting is finished, and from the want of proper attention to cleanliness among the people themselves; and in proof of this, I would instance a circumstance which has lately occurred in a neighbouring village. The Poor Law Guardians, thinking the fever might be checked by whitewashing and cleansing the cottages, procured pails and brushes, with a quantity of lime, for this purpose. They then sent notice to the people that whoever called for these might have them to whitewash and clean their own cottages; but after waiting for some time, not a single person came to request them!

Yet still in this neighbourhood (I mean the adjacent villages of Blewbury, Hagbourne, and Upton) the ravages of the fever have been frightful, and the village bells are tolling almost every day in the week. It attacks both old and young, but more especially those from 6 to 20 years of age, and whose circumstances are impoverished. In one case, four persons have died in one family; in another case, after the mother had nursed her husband and four children with the fever, and brought them through it in safety, she herself caught it, and died enceinte with a fifth child; and at this time there is an instance where the father, mother, and four children, are all ill with this same fever.

The great feature of the disease is the horrible diarrhœa. The fever commences with drowsiness, shivering, pain in the back and limbs, headache, sickness, and thirst, the pulse being small and quick; the skin is hot, and the tongue also is hot, brown, and furred. *About the sixth day, in the bad cases, commences the most dreadful* diarrhœa, which soon reduces the person to a skeleton. When the diarrhœa has been established for a few days, the patient becomes insensible for hours or days together; blood is evacuated in large quantities from the bowels, and is brought up in large quantities also by the mouth.

In this latter stage of the fever, nothing can present a more horrible picture than the poor patient: reduced to a skeleton, totally insensible; constant evacuations of blood and serum soaking through the bed clothes, although six and eight pairs of clean sheets are used in a day; blood issuing from the mouth at intervals, and the mouth and nostrils clogged with black blood; the pulse is scarcely to be felt; the tongue is covered with a thick black fur,—is hot and dry, and the whole surface of the skin is hot, dry, and cracked. In some instances abscesses form all over the body, but particularly on the upper extremities, on the scalp, and on the abdominal parietes; these abscesses arise as hard lumps felt beneath the skin, and are of a livid red or purple colour; some of them are as large as an egg; many burst; but a great many subside without doing so.

The most successful treatment has been in the exhibition of small doses of the sesquicarbonate of soda at the commencement of the fever; and chalk, opium, catechu, and aromatics, with starch and opium injections, to stop the diarrhœa.

When the tongue assumes the black fur, the only remedy that appears of much service is brandy, well diluted. The quantity given is small, just sufficient to keep the pulse from sinking too low, for it has been abundantly exemplified in this fever that a too liberal administration of brandy, or a too energetic use of bark and ammonia, does harm.

The operation of the brandy in some cases is wonderful. Under its use the skin becomes moist; the tongue becomes also moist, and the black fur comes off from it almost like a black slough; the patient gets some refreshing sleep, and is saved. I might send you numerous cases, but I have already trespassed too much on your time.

I am, your obedient servant,

HORATIO COARE BRENCHLEY.

Aston, near Wallingford, Berkshire,
Dec. 8th, 1846.

⁂ We shall be glad to hear again from our correspondent, should he have any additional facts to communicate.

A SECUNDUM ARTEM PRESCRIPTION.

SIR,—As I conceive it is one of the duties of a medical journalist "to hold, as it were, the mirror up" to the doctors, and "to show the very age and body of the time his form and pressure," as far, at least, as regards things medical, I send you the following prescription, which has accidentally fallen into my hands. This elaborate performance is the work of no quack, but of an honest and legitimate practitioner. If the writer of it, or any equally learned Theban of the polypharmacian school, which the editor of one of the Quarterly Reviews has been of late inspecting, will favour me, through the columns of your journal, with an exposition of the therapeutical indications such a prescription as this is intended to fulfil, I shall be much obliged. Is it not melancholy to see such a document as this from the pen of a licensed practitioner? It enables us to perceive to what a sad pitch of degradation our noble art has been brought by the modern polypharmacists! When such are the corruptions of medical science entertained by legitimate practitioners, can we wonder that homœopathy and all other forms of quackery should flourish and even *be preferred* by a large body of the public?—I am, sir,

Your obedient servant,

Νεκρὸς οὐ δακνει.

Dec. 9th, 1846.

The Prescription.

℞ Acid Hydrocian. (Scheele's) gtt. xvj.
Decoct. Aloes Comp. ℥ij.
Ammon. Ferri Tart. ʒj.
Iodidii Ferri, ℈ij.
Tinct. Valerian Ammon. ʒvj.
Liquor Potassæ, ʒiij.
Ter-chloridii Carb.
Tinct. Canthar. aa. ʒiss.
Syrup. Zinzib. ℥j.
Aquæ Cinnam. ad ℥viij. M.

A tablespoonful in a wineglass of water three times a day.

Miss ——, *Nov.* 24, 1846.

⁂ The writer of this letter has forwarded to us his name, or we should have scarcely conceived it possible that such a prescription could have been written by one whom our correspondent calls a "legitimate" practitioner. Well may medicine be called a "mystery" if these are to be the ostensible curative means employed for the removal of disease. What could have been the therapeutical designs of the prescriber upon the alimentary canal of the young lady who was destined to swallow a tablespoonful of this compound three times a day, we cannot pretend to determine: but in these days, when there is such a wide-spread *dilettantism* in (theoretical) chemistry, it is rather surprising to find such a series of chemical incompatibles, as are here jumbled together. It would be a good problem for a candidate for honours in the University of London to set him to determine the final result, the *caput mortuum*, of all the chemical changes which would take place among these different substances. One fact appears quite clear. The prescriber probably intended to give Prussic acid, iodide of iron, and caustic potash: whereas by putting them together his patient would swallow Prussian blue, oxide of iron, and iodide of potassium! The patient perchance gets well, and the cure is referred to Prussic acid!

Selections from Journals.

PATHOLOGY.

ON THE BLOOD CORPUSCLES OF THE HUMAN EMBRYO. BY KŒLLIKER.

HAVING had the opportunity of examining the blood of a human embryo at the third month, Kœlliker furnishes the following account of the principal kinds of corpuscles which he there found:—

Of these there were three varieties: the first consisted of coloured nucleated corpuscles; the second of coloured non-nucleated ones; and the third of colourless ones. 1. In the blood of the hepatic and portal veins the coloured nucleated corpuscles constituted about one-fourth, in the blood of the rest of the body about from one-sixth to one-eighth, of all the coloured corpuscles. The majority measured about 0·0004 of a line; those in the liver even 0·006 and 0·0025 of a line. Most of them were flattened and slightly depressed on the surface; a few were quite globular, and a few others (but those only in the *liver*) were of a roundish oval form. In the blood of the liver these corpuscles were of different colours, varying from a pale yellow to a reddish yellow. In some the colour was so deep that the nucleus could not be distinguished until brought into view by chemical re-agents. This dark colour prevailed in almost all the nucleated corpuscles in the blood of the rest of the body. Water and acetic acid acted on these corpuscles as they do on the red corpuscles in the blood of adults. The nuclei were in all cases parietal, and in the flat ones mostly situated at the edge of the corpuscle. In the majority of the corpuscles of the liver, and in all those of the body, the nuclei were single. In some few of the former, however, two or three nuclei were found in each corpuscle, in which case they were not situated together at one point, but usually occupied two opposite extremities in the round corpuscles, and the extreme points of the long diameter in the oval ones. They had a roundish flattened form, seldom elliptical. The round ones measured from [illegible] to 0·0002; (average 0·0015), the elliptical ones as much as 0·0025, of a line in diameter. They were vesicular in structure, and were provided with a nucleolus in the form of a large granule. Most of them were more or less filled with small granular particles, and had an uneven outline; the smallest appeared almost homogeneous and dark. They were insoluble in water and in acetic acid. By the latter re-agent, some of them were resolved into two bodies. 2. The coloured non-nucleated blood corpuscles constituted the majority of all the coloured ones: they were flattened or slightly depressed on the surface, and measured from 0·003 to 0·004 of a line in diameter. With the exception of slight irregularity in the form of some of them, these corpuscles were exactly identical with the red blood corpuscles of an adult. 3. The colourless corpuscles (which are different from the colourless cells found in the vessels during the earliest formation of the blood) form an ingredient in embryonic blood which has been hitherto unknown (?). The majority of these were found in the portal and hepatic veins in the liver: they were also observed, though in much less abundance, in the blood of the inferior cava previous to the entrance of the hepatic veins into it; also in the heart, and very sparingly in the blood of the rest of the body, and in the umbilical vein. Almost all these colourless corpuscles were globular, seldom elliptical, and averaged from 0·003 to 0·004 of a line in diameter, the largest sizes being 0·0015 and 0·006. Each consisted of a membrane, contents, and a nucleus. The membrane was exactly similar to that belonging to the coloured nucleated corpuscles. The contents were composed either of a clear fluid varying in tint from a pale yellow colour to that of water, or of a clear watery fluid, with which was mixed a greater or less quantity of small particles. In the smallest cells, however, in which the membrane was usually applied closely around the nucleus, the contents were few, or none at all. The nuclei were almost all granulated: many were distinctly vesicular; in the cells with yellowish contents they were usually homogeneous and dark coloured. All were parietal, and measured, on an average, from 0·002 to 0·003 of a line in diameter. The smallest occurred in the pale yellow corpuscles; the largest in the large corpuscles with granular contents. In all the small cells they were single; in the large ones frequently double, seldom treble. Towards water and acetic acid they re-acted like the nuclei of the coloured blood corpuscles. Free granulated nuclei were seldom found even in the blood of the liver.—*Schmidt's Jahrbücher*, No. iii. 1846.

COMPOSITION OF A SALIVARY CALCULUS TAKEN FROM A HORSE. BY J. L. LASSAIGNE.

The calculus was removed from the neck of the first molar tooth of the left upper jaw. In less than a year it had attained the size of a hen's egg: it was of a reddish white colour, remarkably hard, and of a laminated structure. In dilute nitric acid it dissolved with effervescence, and deposited some mucous flocculi. The filtered solution, when saturated with ammonia, threw down a white precipitate of phosphate of lime. Analysis of a portion of the calculus furnished the following results:—

Water	3·27
Soluble salivary matter	6·19
Mucus	4·50
Phosphate of lime	2·70
Carbonate of lime	83·36

The essential ingredient in the calculus, therefore, was carbonate of lime, whilst in human salivary calculi the principal ingredient is phosphate of lime.—*Heller's Archiv*, Heft. 2, 1846.

Medical Intelligence.

ANIMAL MAGNETISM SUPERSEDED—DISCOVERY OF A NEW HYPNOPOIETIC.

We learn on the authority of a highly respectable physician of Boston, U. S., that a Dr. Morton, a surgeon-dentist of that city, has discovered a process whereby in a few minutes the most profound sleep may be induced, during which teeth may be extracted, and severe operations performed, without the patient being sensible of pain, or having any knowledge of the proceedings of the operator. The process simply consists in causing the patient to inhale *the vapour of ether* for a short period, and the effect is to produce complete insensibility,—or, as the writer says, intoxication. We quote the following case on the same respectable authority:—"I took my daughter last week to Martin's rooms to have a tooth extracted. She inhaled the (vapour of) ether about one minute, and feel asleep instantly in the chair. A molar tooth was then extracted without the slightest movement of a muscle or fibre. In another minute she awoke, smiled, and said the tooth was not out, had felt no pain, nor the slightest knowledge of extraction. It was an entire illusion."

⁂ The facts are here so candidly stated that any one may put the new process to the test of experiment. Dr. Morton has made no mystery of his proceedings, like the tribe of hypnotic quacks who have lately perambulated the country. Some caution must, however, be observed in employing the vapour of ether in the way suggested. Ether is a strong narcotic, and its vapour speedily produces complete lethargy and coma: it is exceedingly volatile, and rapidly absorbed and diffused through the body, especially when brought into contact with the extensive surface of the air-cells of the lungs. In one case it has destroyed life, and in another caused apoplexy. Thus an individual may not awaken so readily as the young lady whose case we have here quoted.* It must be regarded as producing a state of temporary poisoning in which the nervous system is most powerfully affected; and, as in concussion or narcotic poisoning, sensibility may be so destroyed that operations which in the healthy state would occasion severe pain, may be performed without any consciousness on the part of the patient. The respectability of the source from which we derive our information prevents us from doubting that the writer has accurately described what he saw. The awaking exactly *one minute* after the operation must of course be regarded as an accidental circumstance, depending on the dose of ethereal vapour inhaled. One statement, however, appears to us to require explanation. We can understand the production of insensibility and the temporary loss of consciousness from the effects of ether; but we do not comprehend how, when the individual was perfectly roused to consciousness, there could be the slightest doubt as to whether the tooth was in or out of the mouth! All who have undergone this operation know that from the imperfect sense of touch possessed by the tongue, that the gap occasioned by the loss of a tooth appears about ten times as large as it really is. Then, again, we can believe that no pain might be felt during the operation; but how can any narcotic annihilate pain *in futuro*, when its effects on the nervous system have entirely ceased? Ordinary sleep often produces a temporary loss of sensation of pain: but this immediately returns in the waking state.

THE ROYAL COLLEGE OF SURGEONS.

The following gentlemen were elected Fellows by examination on the 10th inst.; viz. Robert William Bloxam, Isle of Wight, diploma dated Nov. 19, 1830; George Borlase Childs, Fore Street, London, May 7, 1838; James Jones, Judd Street, Brunswick Square, May 2, 1838; and Frederick Justus Tomlin, Upper Clapton, March 24, 1825.

The following gentlemen were admitted Members on Friday, December 11, 1846:—H. Haycraft, R. M. Craven, C. Palmer, G. Holland, H. Sutherin, W. H. Clarke, M. Francis, R. Allen, J. S. Beale, G. H. Edwards, C. R. Robinson, and J. Kidd.

APOTHECARIES' HALL.

The following gentlemen passed their Examination and received Certificates to practise on Thursday, December 10, 1846:—Julius Watson Bradshaw, Hull; William Philson, Hitchin; Edward Lawrence West, Camelford; and Jonathan Barber, Sheffield.

BIRTHS & DEATHS IN THE METROPOLIS

During the week ending Saturday, Dec. 5.

BIRTHS.		DEATHS.		*Aver. of 5 yrs.*	
Males....	687	Males....	505	Males....	493
Females.	663	Females.	545	Females.	475
	1350		1050		968

DEATHS IN DIFFERENT DISTRICTS.

(34 *in number;—Registrars' Districts*, 129. *Population*, in 1841, 1,915,104.)

WEST—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	144
NORTH—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	194
CENTRAL—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London ....(Pop. 374,759)	192
EAST—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar ....Pop. 393,247)	254
SOUTH—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich ....(Pop. 479,469)	266
Total	1050

CAUSES OF DEATH.

Col. A. Weekly Averages of 5 Autumns; Col. B. of 5 Years.

		A.	B.
ALL CAUSES	1050	1000	968
SPECIFIED CAUSES	1043	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	164		
2. Dropsy, Cancer, &c. of uncertain seat	80	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	169	151	137
4. Lungs, and other Organs of Respiration	361	313	294
5. Heart and Blood-vessels	54	29	27
6. Stomach, Liver, and other Organs of Digestion	90	70	72
7. Diseases of the Kidneys, &c. ..	15	8	7
Childbirth, Diseases of the Uterus, &c.	10	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c.	12	6	5
10. Skin, Cellular Tissue, &c.	3	2	2
11. Old Age	55	66	67
12. Violence, Privation, Cold, and Intemperance	30	[illegible]	[illegible]

---

* We have since learned, from another quarter, that the respiration of the vapour in the manner described has been tried in numerous cases without the occurrence of any accident.

ADVERTISEMENTS.

Just published, 8vo. cloth, 10s. 6d.

ON the PLAGUE; more especially on the Police Management of that Disease: with Hints on Quarantine. By A. WHITE, M.D. Deputy Inspector-General of Military Hospitals.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. price 1s.

THE MOTIVES to INDUSTRY in the STUDY of MEDICINE: an Address delivered at St. Bartholomew's Hospital, Oct. 1, 1846. By JAMES PAGET, F.R.C.S.; Warden of the College; and Lecturer on Physiology in the Hospital.

By the same Author,

RECORDS of HARVEY: in Extracts from the Journals of the Royal Hospital of St. Bartholomew; with Notes. 8vo. 2s. 6d.

London: John Churchill, Princes Street, Soho.

Just published, 8vo. 15s. cloth,

DR UNDERWOOD'S TREATISE on the DISEASES of CHILDREN: with Directions for the Management of Infants. The Tenth Edition, revised, with the addition of much new matter. By HENRY DAVIES, M.D. Fellow of the Royal College of Physicians, and Senior Physician to the British Lying-in Hospital.

London: John Churchill; Longman and Co.; Simpkin and Co.; S. Highley; and T. Hill. Dublin: Hodges and Smith.

MR. CHURCHILL'S SERIES OF MANUALS.

Fcp. 8vo. cloth, 12s. 6d. each volume,

Aggregate Sale, 27,750 Copies.

1\.
MATERIA MEDICA and THERAPEUTICS. By Dr. ROYLE, F.R.S.

2\.
PHYSIOLOGY. By Dr. CARPENTER, F.R.S.

3\.
CHEMISTRY. By Dr. FOWNES, F.R.S.

4\.
SURGERY. By Mr. FERGUSSON, F.R.S.E.

5\.
MEDICAL JURISPRUDENCE. By Mr. TAYLOR, F.R.S.

6\.
NATURAL PHILOSOPHY. By Dr. GOLDING BIRD, F.R.S.

7\.
ANATOMY. By Mr. ERASMUS WILSON, F.R.S.

"We here give Mr. Churchill public thanks for the positive benefit conferred on the Medical Profession by the series of beautiful and cheap Manuals which bear his imprint."
Brit. and For. Medical Review.

London: John Churchill, Princes Street, Soho.

On the First of January, Volume 4,
post 8vo. 6s. 6d. cloth,

DR. RANKING'S HALF-YEARLY ABSTRACT of the MEDICAL SCIENCES.

London: John Churchill, Princes Street, Soho.

Just published, in 8vo. price 8s. cloth,

THE PHILOSOPHY of LIFE, HEALTH, and DISEASE: Original Views explanatory of their Nature, Causes, and Connexion; and the Treatment of Disease upon a few General Principles, based upon the Laws of Nature. By CHARLES SEARLE, M.D. M.R.C.S.E.

"A work abounding in valuable information and much that is new; deserving the attention of the public and of the profession, and well calculated to put an extinguisher on the quack; but as it aims a shaft at the *guinea fee and Latin prescription* of the regular also, we, as champions of the *craft*, are bound to condemn it as an *infamous* publication."—*Lancet.*

John Churchill, Princes Street, Soho.

SIR B. BRODIE'S LECTURES on SURGERY, carefully revised, are now in course of publication in THE LANCET. Subjects of Lecture, No. 1 published Saturday, December 12th, Deformities of the Spine and their Treatment. A Copy of the MEDICAL REGISTRATION BILL, as altered and as about to be presented to Parliament, will be published in THE LANCET of Saturday, January 3, 1847. An Account of all the proceedings of Parliament relating to THE MEDICAL REGISTRATION BILL, will be published week by week in THE LANCET. Price 15s. the Half-Year; Stamped for Post, 17s. May be received 400 miles from London on the day of publication. Orders taken by all Booksellers and Newsmen in Town and Country.

Just published, 8vo. price 2s. 6d. Part 5 of the

MICROSCOPIC ANATOMY of the HUMAN BODY in HEALTH and DISEASE. Illustrated with numerous Drawings in Colour. By ARTHUR H. HASSALL, M.R.C.S.E. F.L.S. &c. To be completed in about 12 Monthly Parts.

"Mr. Hassall's publication deserves to be ranked amongst the most important and valuable of the works of the present day. The plates are beautifully executed and coloured, and convey a perfect idea of the objects which they are intended to illustrate."—*Lancet,* Dec. 5th.

London: S. Highley, 32, Fleet Street.

POULTICES &c. SUPERSEDED.—The EPITHEM COMPANY beg to call attention to MARKWICK'S IMPERMEABLE SPONGIO PILINE as an effectual, cleanly, cheap, and valuable substitute for Poultices, &c., which retains its warmth and moisture for several hours. And to the IMPERMEABLE PILINE as a useful remedy in Rheumatism, Gangreena, Senilis, &c., and as a vehicle for stimulating liniments, to supersede mustard plasters. See the Medical Gazette, Oct. 23d; Medical Times, Sept. 19th, Nov. 14th, and Dec. 5. Sold Wholesale at the Company's Depôt, 69, King William Street, City.

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the Parish of St. Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Street aforesaid, Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in the said City, by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Bookseller.
Friday, Dec. 18, 1846.

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	2	Convulsions	55
Measles	6		
Scarlatina	25	Bronchitis	77
Hooping-cough..	34	Pneumonia......	99
Typhus	48	Phthisis	120
		Dis. of Lungs, &c.	10
Dropsy..........	9	Teething........	10
Sudden deaths ..	3	Dis. Stomach, &c.	8
		Dis. of Liver, &c.	17
Hydrocephalus ..	26		
Apoplexy........	24	Childbirth	8
Paralysis........	28	Dis. of Uterus, &c.	2

Remarks.—The total number of deaths was 50 above the autumnal and 82 above the annual average. The mortality for the first time for many weeks exceeds the averages. Diseases of the lungs and typhus are very prevalent and fatal. In all the districts, the mortality was above the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer ....29·63
,, ,, Thermometer[a]..............32°
Self-registering do.[b] ......max. 56° min. 9·8
,, in the Thames water ,, 46° ,, 36·2

[a] From 12 observations daily. [b] Sun.

Rain, in inches, ·08: sum of the daily observations taken at 9 o'clock.

Meteorological. — The mean temperature of the week was 7·3° below the mean of the month (39·3°). The extreme hebdomadal range in the self-registering thermometer was 46·2° On Sunday, the 29th of November, the thermometer suddenly fell to nearly 23° below the freezing point.

NOTICES TO CORRESPONDENTS.

Dr. Searle.—The notice is written, and will appear shortly.

Mr. B. Travers's paper will be inserted next week.

Mr. Hunter's communication is in type, and will, if possible, be given in the following No.

We will endeavour to meet Dr. Camps's wishes.

At the hour of going to press, communications were received from the following gentlemen:— Mr. Storks, Dr. G. H. Adams, Dr. B. Haygarth (Canada), Mr. H. J. Jenkins, Dr. R. Wake.

DINNEFORD'S SOLUTION of MAGNESIA, now greatly improved in purity and condensation.

The high testimonials received in favour of Mr. Dinneford's preparation from the most eminent members in every branch of the medical profession, have established its superiority on an irrefragable basis, and placed it at once beyond the reach of competition.

"*Mr.* Dinneford's solution may fairly be taken as a type of what the preparation ought to be."
Pharm. Journal, May 1846.

Prepared by Dinneford and Earland, 172, Bond Street, Chemist to Her Majesty the Queen *Dowager*, and H.R.H. the Duke of Cambridge; and sold by all respectable Chemists.

NEW WORK BY DR. E. J. SEYMOUR.

In the press, in 2 volumes, 8vo.

THOUGHTS on the NATURE and TREATMENT of several SEVERE DISEASES of the HUMAN BODY; including—1. Diseases of the Stomach; 2. Gout; 3. Melancholy Mental Derangement); 4. Epilepsy; 5. Neuralgic Affections Brow Ague, Sciatica, &c. By Edward J. Seymour, M.D. F.R.S. late Senior Physician to St. George's Hospital.

Longman, Brown Green, and Longmans.

MATRON. — BUCKINGHAMSHIRE GENERAL INFIRMARY.—A Vacancy having occurred by the resignation of the MATRON, Candidates for the appointment, who must not be under 30 years of age, are requested to forward their testimonials of Character and Qualification to the Secretary on or before the fourth day of January next. The Election will take place on the 6th January, and the Matron will be required to commence her duties on Wednesday, the 4th March. The Salary is £40 per annum, with board and lodging, with a sum allowed for washing, and tea and sugar.

There are also vacancies for TWO NURSES, whose services will be required immediately after the 6th January; and applicants are requested to send their testimonials of Character to the Secretary on or before 4th January.

H. Heyward, Sec.
Aylesbury, December 8, 1846.

BATHS and WASH-HOUSES for the LABOURING CLASSES.—A certificate, of which the following is a copy, has been signed by the Presidents and Vice-Presidents of the Colleges of Physicians and Surgeons, the Wardens of the Apothecaries' Company, and nearly 100 more of the most eminent medical practitioners of the metropolis, and will shortly be printed by the Committe for general distribution:—

CERTIFICATE.

It has been stated to us, that many labouring men and women in London fear that the use of the warm bath might make them liable to take cold; and we have been requested, on behalf of the Committee for promoting the establishment of Baths and Wash-houses for the Labouring Classes, to express our opinion on the subject.

We, the undersigned physicians and surgeons, therefore, hereby certify, that no fear need be felt of the moderate use of the warm bath making the bathers liable to take cold. On the contrary, we most strongly recommend the general establishment and use of public baths, warm and cold, and wash-houses, from our conviction of the great good of a clean and healthy skin and clean clothing to the health of the whole body.

We are of opinion, that, if London were fully supplied with public baths, warm and cold, and wash-houses, and they were properly made use of, the amount and severity of disease and the number of deaths would be materially diminished.

The Committee regret that it is not in their power to apply personally to more than a comparatively small number of the medical practitioners of the metropolis, and that they are compelled to take this mode of requesting that any gentlemen who may be willing to add his name to the list, will be so obliging as to address a note before the 31st instant to William Cotton, Esq. Chairman, at the Committee-room, authorizing him to make the addition.

By order, John Smith, Clerk.
Committee Room, 3, Crosby Square,
Dec. 10, 1846.

No 995.—Vol. XXXVIII.
[New Series, No. 87.]

Price {Unstamped, 8d.
Stamped....9d.

·LONDON MEDICAL GAZETTE

OR

Journal of Practical Medicine,

Published every Friday Morning.}

December 25, 1846.

{Also in Monthly Parts.

ORIGINAL COMMUNICATIONS.

Page

A Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery, as bearing upon the Treatment of Cardiac and Pulmonary Diseases. By Norman Chevers, M.D. With Engravings. Part VIII....................1087
  Malformation by Excess of the Pulmonary Artery 1087
    Permanence of the Arterial Duct 1087
    Permanence of the Duct associated with an incomplete State of the Ventricular Septum.......................1087
    Patency of the Duct associated with an unclosed State of the Foramen Ovale1088
    Patency of the Arterial Duct, unassociated with any other Defect in the Heart or its Appendages 1090
    The left Subclavian Artery originating from the Arterial Duct 1092
    Aneurism of the Arterial Duct 1092
On the Pathological Characters of the Blood as it exists in the state of the Sanguiferous System usually designated Anæmia. By William Camps, M.D. Edin. Physician to the Farringdon General Dispensary 1093
On the Use of Tobacco in the Treatment of Tetanus. By B. Travers, Jun. Esq. Assistant-Surgeon, and Lecturer on Surgery, at St. Thomas's Hospital 1695
Case of Ulceration of the lining Membrane of the Uterus. By C. B. Rose, F.R.C.S. &c. Swaffham. Communicated by Dr. J. C. W. Lever 1097

LEADING ARTICLES.

State of Public Health in the Metropolis....1099
Remarks on the Completion of the Volume 1100

REVIEWS.

Page

The Surgical, Mechanical, and Medical Treatment of the Teeth; including Dental Mechanics. Illustrated with Engravings. By James Robinson, Surgeon Dentist to the Metropolitan Hospital, &c. 1100

PROCEEDINGS OF SOCIETIES.

Westminster Medical Society.—Mr. Hancock on a Case of Disease of the Hip-joint, with Abscess breaking into the Rectum 1101
South London Medical Society.—Mr. Crisp on Infantile Pleurisy 1104

SELECTIONS FROM JOURNALS, ETC.

Vaginal Enterocele complicating Labour ..1098

MEDICAL INTELLIGENCE.

Appointment of Dr. M'William to the Board of Customs.............................1106
Tricks of the Chiropodists—Manufacture of Corns 1107
Sanitary Regulations respecting Syphilis ..1108
Obituary 1108
  Professor Tommasini....................1108
  Dr. John Foley..........................1108
Prosecutions by the Apothecaries' Society..1108
The Asiatic Cholera 1108
Medical Appointment 1128
Royal College of Surgeons.—List of Gentlemen admitted Members.................1128
Apothecaries' Hall.—Gentlemen who have obtained Certificates 1128

WEEKLY TABLES, ETC.

Births and Deaths in the Metropolis........1128
Meteorological Summary...................1128
Notices to Correspondents 1128
Index to the Volume 1009

[For Advertisements, see next page.

ONE-VOLUME
ENCYCLOPÆDIAS AND DICTIONARIES.

s. d.

1. COPLAND'S Dictionary of Practical Medicine.
Vols. 1 and 2 .... 60 0

2. Blaine's Encyclopædia of Rural Sports:—
Hunting, Shooting, Fishing, Racing, &c. 600 Woodcuts 50 0

3. Brande and Cauvin's Dictionary of Science, Literature, and Art. Numerous Woodcuts 60 0

4. Cresy's Encyclopædia of Civil Engineering.
Numerous Woodcuts .... [*Just ready.*

5. Gwilt's Encyclopædia of Architecture, Historical, Theoretical, and Practical. 1,100 Woodcuts 52 6

6. Johnson's Farmer's Encyclopædia and Dictionary of Rural Affairs. Numerous Woodcuts 50 0

7. Loudon's Encyclopædia of Agriculture: the Theory and Practice of Cultivation; the Economy and Management of Farms. 1,100 Woodcuts 50 0

8. Loudon's Encyclopædia of Cottage, Farm, and Villa Architecture and Furniture. 2,300 Woodcuts 63 0

9. Loudon's Encyclopædia of Gardening; its History and Present State; its Theory and Practice. 1,000 Woodcuts 50 0

10. Loudon's Encyclopædia of Plants; including all the Plants found in, or introduced into, Great Britain. 10,000 Woodcuts 73 6

11. Loudon's Encyclopædia of the Trees and Shrubs of Great Britain, Native and Foreign. 2,000 Woodcuts 50 0

12. M'Culloch's Dictionary of Commerce and Commercial Navigation. Maps and Plans, 50s.; or strongly half-bound 55 0
*** Supplement to the last Edition, 3s. 6d.

13. M'Culloch's Geographical, Statistical, and Historical Dictionary of the World. (2 vols.) Six large Maps 63 0
*** Supplement to the last Edition, 5s.

14. Murray's Encyclopædia of Geography.
82 Maps and 1,000 other Woodcuts 60 0

15. Ure's Dictionary of Arts, Manufactures, and Mines.
1,241 Woodcuts 50 0
*** Supplement of Recent Improvements. Numerous Woodcuts 14 0

16. Webster and Parkes's Encyclopædia of Domestic Economy:—Furnishing, Housekeeping, Cookery, &c. 1,000 Woodcuts 50 0
*** To be completed in One more Volume.

LONDON: LONGMAN, BROWN, GREEN, AND LONGMANS.

Original Communications.

A COLLECTION OF FACTS ILLUSTRATIVE OF THE

MORBID CONDITIONS OF THE PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF CARDIAC AND PULMONARY DISEASES.*

By Norman Chevers, M.D.

[Continued from p. 967.]

MALFORMATION BY EXCESS OF THE PULMONARY ARTERY.

Permanence of the arterial duct (continued).

The cases of permanence of the canalis arteriosus which now claim our attention are less complete, and are therefore, in some degree, less important in a pathological point of view, than those which were discussed in the preceding section:—they certainly tend to substantiate the negative statement that the duct may remain unclosed independently of any very distinct cause of obstruction to the circulation;—still, most of these cases appear to be defective in several leading particulars, and it is highly probable that in the larger proportion of their number, if not in all, the non-closure of the vessel has been due to the existence of a serious impediment in some part of the vascular circle, which impediment may, in some instances, have ceased to act after a permanent communication between the pulmonary and systemic trunks has been established; while in others it has continued in operation throughout the life of the individual, although its existence has subsequently escaped the scrutiny of the morbid anatomist. This conjecture is rendered probable by the fact, that, in some of the following examples, the patients appeared to be altogether free from the usual symptoms of the blue disease, while in the others the intense lividity of surface, and severe thoracic oppression from which the individuals suffered, rendered it evident that they were the subjects of some kind of permanent cardiac obstruction.

Permanence of the duct associated with an incomplete state of the ventricular septum.

In this class of instances it appears to be almost a matter of certainty that the cardiac and arterial defects must have been due to the existence both before and after birth of some serious impediment to the circulation, which either ceased to operate as age advanced, or remained undetected after death, by those who observed the cases: the scantiness of the following histories renders the latter idea by no means improbable.

Richerand* relates the case of a man who presented himself at one of the Parisian hospitals to be operated on for stone in the bladder. His complexion was remarkably livid, his respiration laborious, and his pulse irregular. He could not utter two words in succession without taking breath, was obliged to sleep in a sitting posture, and was particularly remarkable for his indolence. This indolence, joined to the great simplicity of his nature, was such that he had never been able to maintain himself. A small bleeding from the arm relieved his pains, but the difficulty of breathing increased, and he died from suffocation.

The heart was found to be full of blood. The right auricle was principally dilated; the ventricles were nearly equal in the thickness and capacity of their walls. The *ventricular septum* was perforated by an aperture about half an inch in extent, and directed obliquely from below upwards, from before backwards, and from right to left, so that not only the direction of the opening, but likewise a kind of valve, formed in the right ventricle by a fleshy column so placed as to prevent the return of the blood into the right ventricle, clearly showed that the blood flowed from the left into the right ventricle, and thence into the *pulmonary artery*. This vessel was aneurismally distended up to its division. The *ductus arteriosus* was an inch in length, and large enough to admit a goose-quill, allowing a free passage of the blood from the pulmonary artery into the aorta. The *foramen ovale* was closed.

The long existence of symptoms in the above case renders it evident that the cyanosis and other evidences of delay to the circulation were not due, as frequently happens in cases of congenital heart disease, to the recent superaddition either of pulmonary obstruction or of endocardial or valvular lesions. It is to be regretted that the condition of the lungs and of the ascending aorta was not observed, as there had in all probability always existed some severe cause of impediment in both. There must have been a greater amount of impediment on the left side than on the right, but the small diameter of the arterial duct renders it probable that the aorta was not completely obliterated.

---

* *Erratum.*—In the last section, note to page 966, last line of first column, and first line of second column, *for* "the loop formed by the pneumogastric and left recurrent laryngeal nerves which encloses the arch of the aorta, at the parts where arrangement which," &c., *read*, "the loop formed by the pneumogastric and left recurrent laryngeal nerves which encloses the arch of the aorta at the parts where the vessel is liable to become constricted, an arrangement which," &c.

* Nouveaux Elémens de Phys., Paris, 1811, t. I. p. [illegible].

Sandifort speaks of a case in which the *arterial duct* was present, but not of so large a size as it naturally is, and the aorta arose equally from both ventricles.*

In the case (cited by M. Louis) of a man, ætat. 40, who had been the subject of a certain degree of cyanosis, the *pulmonary artery* was found to be dilated, and the *arterial duct* was sufficiently wide to admit a large goose-quill. The ventricles communicated by a large opening in the *septum.*

The preparation numbered 1382^{16} in Guy's Museum presents a very remarkable modification of this description of congenital fault. It is the heart of a child between 3 or 4 years of age, who was under the care of my friend Dr. Lloyd suffering from hooping-cough. Dr. L. was informed that the child had always been liable to occasional lividity of the face and nails; but, during his attendance, he had never perceived any appearance of cyanosis, until on one occasion, when he found the little patient in a violent paroxysm, with its face extremely blue and congested: the child was placed in a bath, and there expired. The right auricle is of large size, the right ventricle is also large, and its walls are rather hypertrophic. The right auricle presents an abnormal oval aperture, which is situated just above the left margin of the right auriculo-ventricular opening, partially separating the anterior tricuspid curtain from its upper attachment. This aperture extends into the right ventricle, and is continued through the upper and back part of the *ventricular septum* into the left ventricle, where it opens by an oval orifice, about three lines in diameter, in the tendinous spot, which is situated just below the aortic valves. In this manner there exists an abnormal communication between the right auricle and the right and left ventricles. The *pulmonary artery* is wide, its left branch (the right has not been preserved) remarkably so. The pulmonary valves are healthy. The *arterial duct* is open, but is barely capable of admitting a common probe. The *foramen ovale* is perfectly closed. The left auricle is rather contracted. The left ventricle is of fair size, but not apparently either hypertrophied or dilated. The aortic valves are quite healthy; the ascending aorta is rather dilated: portions of its lining membrane are somewhat diseased. As mentioned in the catalogue, *the descending aorta becomes remarkably small immediately distal to the left subclavian artery,* but without presenting any appearance of stricture, or the slightest trace of morbid alteration in its tissues.

It may perhaps be considered that in some of the above cases the permanence of the arterial duct was owing to the closure of the foramen ovale previously to birth, but it appears to be highly improbable that so unusual a change as the too early occlusion of the foramen could be effected in a case where obstruction to the circulation had already prevented the completion of the ventricular septum.

Patency of the duct associated with an unclosed state of the foramen ovale.

It appears that in most of the cases where the fœtal condition of the heart has become permanent, the individuals have suffered very severely from all the worst symptoms of cardiac obstruction. The details of the cases unfortunately do not furnish us with any distinct clue either to the causes which determined the non-closure of the passages, or to those which have subsequently given rise to the symptoms of morbus cæruleus. And it is, of course, unnecessary to attempt an hypothetical explanation of a point which appears to admit of being demonstrately elucidated by the careful examination of future cases of this description.*

M. Jurine observed the case of a child which suffered from the usual symptoms of blue disease, and died at the age of 6 months. The left auricle was very capacious; the *foramen ovale* was still pervious, as was also the *arterial canal,* which was, however, sensibly diminished in calibre.†

Dr. Farre and Mr. English relate the case of a female child which lived 18 days. Nothing remarkable was observed at her birth, but she cried faintly, and seemed rather weak. Her skin and eyes were somewhat yellow. There was an occasional threatening of suffocation when she sucked; unusual quietness and perpetual drowsiness were remarked during the first week; and in the course of the second week she had fits of crying, during which the respiration became affected in a remarkable manner. On the 14th night, the fit of crying was more severe than on any former occasion, and for several moments the breathing was suspended, the lips becoming black, when a strong convulsive effort, with a deep sigh, restored animation. On the 18th day, the child had a violent paroxysm, in which the breathing was frequently suspended for more than a minute; the lips were black, and the eyes fixed. At 8 o'clock she seemed to be dying: the extremities were cold; the countenance cadaverous; the lips black; the breathing performed by short convulsive inspirations and long groaning expirations, with now and then a sigh. On putting her into a warm bath, it was surprising to see the improved state of the respiration, the expirations being assisted by gentle pressure on the abdomen and ribs. This treatment having been continued for half an hour, she was wrapped in warm flannel, and seemed to sleep for an hour, when the breathing gradually got worse, and all the former train of symptoms returned. The warm bath was again resorted to, with the same benefit as before; but, on taking the child out of the bath, she soon ceased to breathe if left to her own efforts. Mr. English therefore kept his hands constantly on the thorax and abdomen, and, by assisting the expirations, prolonged her life about two hours. For ten minutes together she sometimes lay without the least appearance of life, when a strong convulsive action of all the muscles of the thorax and abdomen, with a deep sigh and several catching sobs, renewed the circulation. Then the colour would return to her lips; she would stretch her limbs and open her eyes. The last struggle of this kind took place a quarter of an hour after he supposed she was dead. He never could feel the pulsations of the heart, although he frequently examined the region of that organ. He once observed that the pulsations of the radial arteries were synchronous. The heart was found to be of proper size and figure, its respective cavities being only proportioned to each other; but the valve of the *foramen ovale* was so very imperfect that a free communication existed between the auricles. The *ductus arteriosus* was open, and larger than natural. The *pulmonary artery* was proportionably larger, but its right and left branches were of their proper size. The liquor pericardii was increased in quantity; the other cavities of the chest were free from serum, and the appearance of the lungs was natural. The liver was overcharged with blood: its gall-bladder and ducts preternaturally contracted. (The skin and eyes continued to be very yellow up to the time of the child's death, and the fæces were deficient in bile).

---

* Observationes Anatomico-Pathologicæ, 1779.

* In instances of this kind it appears to be absolutely necessary to ascertain not only the precise condition of the cavities and orifices of the heart, and of its immediate appendages, but also of the pulmonary vessels, and of the lungs and thoracic cavities and organs generally, as well as of the entire track of the aorta, the large systemic vessels, and principal abdominal viscera.

† Mém. de la Soc. Royale de Méd. t. x. p. [illegible] and quoted by Gintrac.

It is most probable that in this case the symptoms were not by any means due to the open state of the foramen ovale and arterial duct, but were owing to some undiscovered impediment either in the pulmonary or systemic vessels which in the first place occasioned the non-closure of the fœtal canals, and subsequently gave rise to the extreme embarrassment to the cardiac movements.

Mr. J. Hume Spry details* the case of a female, ætat. 17 years, who had never menstruated except once, a short period before her death. She had always, from her birth been remarkably dark-coloured, and the discolouration rapidly increased as she advanced to riper years. The colour of her face was said to have been always blue, and her tongue was very blue. She had continually a very acute throbbing pain in her head, confined principally to the forehead and temples. She had always felt a great pain and sense of weight in her left side, attended with constant palpitations of the heart. Respiration was performed with difficulty, and she had sometimes a very slight cough. She was very indolent; and upon any unusual exertion she was in danger of fainting. Some years previously to her decease she had small-pox so severely as to be in immediate danger. The body was found to be greatly emaciated. The venous system was preternaturally loaded with blood; the pericardium adhered very firmly to the pleura costalis, but did not contain any fluid. The heart was remarkable for its great size and weight, and was distended with an enormous quantity of dark fluid blood; the *foramen ovale* was pervious, and nearly two inches in circumference; the *canalis arteriosus* was open, but its size is not mentioned. The lining of the heart was white, and appeared to be rather thickened. The author made a particular examination of the lungs, having understood that in cases where the lungs have been much obstructed the foramen ovale has been found pervious; but the lungs of this woman were evidently free from any disease. Mr. Spry considered that the appearance of the heart probably did not depend upon obstructive or other disease of those organs.

Dr. Burns has given the following narrative*:—

J. M. was to appearance, when born, a healthy and robust child. Symptoms of disease commenced at the approach of his third year, and increased until his death. He was at first liable to be seized, after any over-exertion, with spasmodic twitches in his muscles, accompanied with urgent cough and dyspnœa; and occasionally, during these paroxysms, the colour of his skin changed to a faint purple hue. Cessation from exertions usually proved sufficient to restore the functions to their natural state. He passed through the usual infantile diseases without material alteration in his symptoms, which remained with little change for forty or forty-two years. During the whole of this period he had been able to follow his usual employment, which was that of a painter; but latterly he acquired a torpid and unhealthy appearance. The symptoms increased in urgency; the paroxysms recurred more frequently than formerly, and were excited by the most trivial causes; the countenance was permanently bloated and purplish; the oppression and anxiety in the chest became intolerable; general œdema supervened; the body was almost incessantly bedewed with a cold and clammy sweat; the appetite failed; the pulse became small, feeble, and hardly perceptible; the debility was extreme. The anxiety and depression rapidly increased, until death put an end to his sufferings. On examination, the thorax was found to contain about a pound of aqueous fluid, of a yellowish tinge. The lungs were every where sound, and free from adhesion. The pericardium contained about two ounces of darker fluid than that effused into the chest. The *ductus arteriosus* and *foramen ovale* were open; the former equalling in size a large crow-quill; the latter the circumference of the barrel of a goose-quill. The brain and abdominal viscera were perfectly healthy; but the veins of the testicles and urinary organs were varicose and turgid with blood.

---

* *Memoirs of the Medical Society of* London, *Vol. vi. p. 17.*

* Observations on some of the most frequent and important Diseases of the Heart, &c. p. 17.

Although no allusion is made to the form and capacity of the chest in either of these cases, it seems to be very evident that, in the three latter examples, the original and principal obstruction to the circulation did not exist in the pulmonary apparatus, but that the chief obstacle lay in some part of the systemic circulation. These cases are almost rendered valueless by the silence of their authors respecting the condition of the aorta, as there appears to be strong reason to believe that there existed some considerable impediment to the flow of blood through that vessel in at least three of the instances. The details of M. Jurine's case are too slight to furnish any clue to the detection of the origiual cause of obstruction.

The following is an abstract of the case of a person whose body was inspected by Mr. Molloy and myself at Guy's Hospital:—

A female, ætat. 32, died of phthisis in Oct. 1837. She was the mother of eight children, five of whom were still living and healthy. Her constitution had never been robust, but she had not been the subject of any severe illness until the preceding winter, when she had a pulmonary attack, which, however, left her in the following spring. Her phthisical symptoms were of three months' duration. She was not supposed to have been the subject of cyanosis, although her face was rather livid during the last fortnight of her life. On inspection,. the lungs were found to present extensive traces of phthisical disease. The heart was small and pale; its right cavities were little distended. The *foramen ovale* was sufficiently wide to admit the little finger. It was partially guarded by a wide and thin valve, which besides its usual connections on the left side, was also attached to the walls of the right auricle above and below by four or five short and slender cords; it appeared to have allowed the passage of blood from the right to the left auricle. The *pulmonary artery* was not diseased, but the *arterial duct* was sufficiently open to permit a large-sized probe to be passed from the aorta into the pulmonary artery; but on the pulmonary side its orifice was guarded by a small nipple-like process, resembling in form the pointed vegetations sometimes noticed upon the aortic valves; the apex of this was fissured, allowing the passage of blood or of an instrument from the aorta, but apparently acting as a complete valve in the contrary direction. The aortic orifice of the duct was wide, and surrounded by linear specks of white deposit. The left auricle and bicuspid valve were healthy. The walls of the left ventricle were rather hypertrophic and were well contracted. The aorta was perhaps slightly dilated, but it was otherwise healthy. The liver, spleen, and kidneys, were enlarged, and considerably congested. The heart with its appendages is preserved in the museum at Guy's Hospital, numbered 1383^{65}.

In this case the condition of the heart was such as to convince me that, although the non-closure of the foramen ovale and arterial duct was possibly determined by the existence of some cause of obstruction to the circulation subsequently to birth, that cause had long since ceased to operate. The fact that blood could pass through the duct only from the aorta to the pulmonary artery, and not in a contrary direction, was sufficient proof that the permanence of the canal had not been maintained by that diseased condition of the lungs which subsequently proved fatal; and the entire absence of cardiac symptoms, together with the generally healthy appearance which the tissues of the heart and its appendages presented, were convincing evidences that the organ had not been compelled, throughout the life of this individual, to struggle against the resistance of any permanent impediment to the circulation.

Patency of the arterial duct unassociated with any other defect in the heart or its appendages.

The appearances presented by a preparation numbered 1383^{80} in Guy's Museum appear to me to have been due to causes similar to those which probably determined the permanency of the duct in the case last cited; but, as the preparation merely consists of a portion of the aorta and pulmonary artery, and as no history of the case has been preserved, it is of course uncertain whether it properly belongs to this class of all. In that specimen the *ductus arteriosus* is merely sufficiently open to admit a very small probe. The tissues of the pulmonary artery, and of the aorta, are entirely free from the slightest appearance of dilatation, or of any other change. The parts are apparently those of a child 8 or 10 years of age. I believe that, in this as well as in the preceding case, the simply open state of the arterial duct was probably due to partial failure in the process by which the canal is naturally closed. The true nature of such cases must, therefore, remain unexplained until the causes which produce the obliteration of the duct have been clearly demonstrated.

The following case, by Professor Huss, of Stockholm, would, at first sight, appear to be one in which patency of the duct existed independently of any other congenital defect in the heart or large vessels; but I am inclined to believe that the lesion was of a far more complicated nature.

The subject of this case, a youth 19 years of age, had generally enjoyed good health: he had, however, been affected with palpitations of the heart after exercise. His skin had never been blue; on the contrary, it was always white and transparent. Five months before his entrance into the hospital, he had been affected with severe articular rheumatism, followed by palpitations, difficulty of respiration, cough, epistaxis, permanent tinnitus aurium, and gradual prostration of strength. After his entrance, he continued to sink, and, at the end of six weeks, expired, without his skin ever having assumed the least blue colour. On examination, the left ventricle was found of an oval shape, enlarged so as to be able to hold a goose's egg; its parietes were an inch in thickness. The aortic valves were corrugated, and studded with osseous concretions; two of these valves had each a perforation as large as a pea. In one of the sinuses of Valsalva there was a small aneurism. The descending aorta was dilated, and formed at the commencement of its arch a sac as large as a pigeon's egg, without there being any lesion of its internal membrane. Two inches three lines from the orifice of the *pulmonary artery* there was a direct communication between its left branch and the aorta, two lines broad and six lines long, so that the ring finger could be passed through it. It terminated in the aorta, just below the origin of the subclavian and carotid arteries*.

This case bears so remarkably close a resemblance in its leading details to one which occurred within my own observation, some years since, at Guy's Hospital, in which patency of the arterial duct, and the subsequent formation of an aneurism of the descending portion of the aortic arch, were evidently due to a strictured condition of the aorta distal to the left subclavian artery, that I am disposed to attribute the occurrence of similar lesions in this case to a like cause of impediment to the systemic circulation, which may have escaped the notice of Professor Huss. At all events, a comparison of this instance with my own case, which is given in the subjoined note*, may not be altogether uninteresting.

The details of most of the above cases are, upon the whole, by no means satisfactory, as there is reason to believe that many of them are deficient in some of their most important particulars; and it is probable that, had we been furnished with the entire histories, several of these examples would have required a different classification from that which I have now given them. Still, none of these cases are deficient in pathological interest, and more than one of them must be received as convincing evidence of the fact, that patency of the arterial duct may be found in cases where there does not exist any discoverable cause of permanent obstruction to the circulation.

---

* Gazette Méd. de Paris, February 11, 1843; as quoted in the *American Journal of Medical Sciences.*

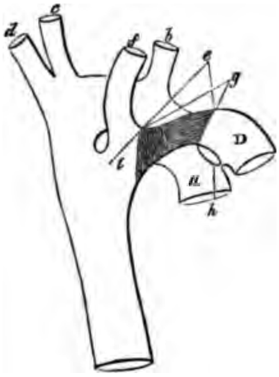
* The preparation numbered 1383^{80} in the collection at Guy's is taken from a man, æt. 21, who died of pneumonia, which was attended with some lividity of the face, but not with sufficient discolouration to lead to a suspicion that he was the subject of any cardiac disease. On inspection, the lungs were found to present extensive traces of recent pneumonia. The right ventricle of the heart was strong, and not particularly dilated; there was considerable thickening of the valves of the *pulmonary artery*, and small concretions adhered to their corpora Arantii. The trunk of the pulmonary artery was greatly dilated; its tissues were so much thickened that it no longer presented its usual structural appearance, but more closely resembled the systemic trunk: portions of its interior were raised by interstitial deposit, and, at one spot, its lining membrane was rendered irregular by vegetations. The pulmonary artery was adherent to the aorta at the spot where the arterial ligament usually exists, and there the two vessels communicated by a rather irregular circular opening, about two lines in diameter, (a far smaller aperture than that which existed in M. Hasse's case). Immediately above this opening, the aorta was remarkably contracted by a narrow and defined stricture. An aneurismal dilatation, about the size of a walnut, existed in the most prominent part of the descending arch of the aorta, nearly opposite to the opening of the duct. There were only two aortic valves: these were greatly thickened, and some irregular masses of vegetations adhered to their ventricular surfaces. It is a remarkable fact that the aorta of this man's brother, who died in the hospital some months afterwards, was found to be furnished with only two semilunar valves. The left ventricle was hypertrophied and dilated. An inspection of this interesting preparation will show that, although no distinct remains of an arterial canal exist, the communication between the arteries is not of an aneurismal kind. Some doubts may be entertained upon this point in M. Huss' case; but it appears, from the description, that there also the abnormal opening was distinct from the aneurismal pouch which existed in the descending portion of the arch of the aorta.

The left subclavian artery originating from the arterial duct.

A remarkable case in which the malformation was considered to exist, is related by J. T. Klinkosch*.

A woman, 32 years of age, who had been sterile for ten years, gave birth to her first child, a boy, which was living and well nourished, but it was the subject of great malformation of the head and face, and died in half an hour after its birth. It was found that the arch of the aorta, (*a*) arising from the left ventricle, passed to the right, and gave off three distinct branches, first the left carotid (*b*), then the right carotid (*c*), and afterwards the right subclavian (*d*). The *pulmonary artery* (D), arising in the usual manner, passed backwards and to the left, and then separated into its two main branches and the *canalis arteriosus* (*e*). This latter canal joined the descending aorta at the distance of four lines beneath the origin of the right subclavian artery; and, from the duct at about one-third of its length from the aorta, the left subclavian artery (*f*) took its origin.

FIG. 1.



I think that, upon inspection of the subjoined figure, which is a correct diagram from Klinkosch's plate, it will be perceived that this malformation differs in no very material degree from that already alluded to at page 963, note 3 (case by Fiorati and Sandifort), in which the left subclavian artery arises from a kind of pouch, situated at the commencement of the descending aorta, which pouch is joined below by the arterial or branchial canal. The portion of vessel (*g*) which is situated between the pulmonary branch (*h*) and the left subclavian artery (*f*) appears to me to represent the entire extent of the arterial duct, while the portion of the canal (*i*) from which the left subclavian arises seems to be merely prolonged from the aorta, and not to be in reality a portion of the arterial canal.

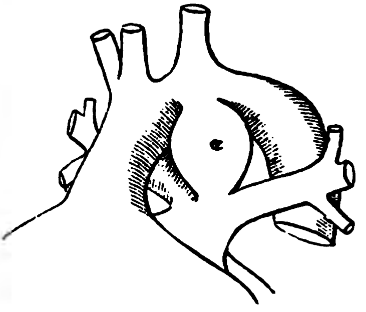
Aneurism of the arterial duct.

The only fully detailed instance of this remarkable lesion with which I am acquainted, is that related by M. Billard*.

In 1826, a male infant, two days old, was brought to the hospital of the Trouves. It was of middle size, its respiration was difficult, its face livid, and its cry stifled. The temperature of its body was natural, the pulse small, frequent, and easily compressed. The child remained two days in this state, and died on the third. On inspection, the stomach and intestinal canal were found remarkably congested, the liver was gorged with blood; both lungs were also engorged. The heart was more voluminous than is usual in infants at birth; the cavities on either side were nearly equally dilated, and were filled with dark blood. The arterial canal (*a*) presented the form of a large cherry-stone; its transverse diameter was about three and a half lines, and its circumference nine lines. Externally it had the appearance of communicating freely with the aorta, but this was not in reality the case, as its interior was filled with organised clots, disposed in layers such as are observed in the aneurismal tumors of adults, merely leaving in the centre a passage which would barely admit a crow-quill. The other organs presented no particular alteration.

M. Billard also makes slight reference to another case of aneurism of the duct which was related to him by M. Baron, and in which the symptoms were less marked than in the above instance.

FIG. 2.



It is probable that, in M. Billard's case, the symptoms were chiefly due to the dilated and weakened condition of the heart, consequent upon the great obstruction to the circulation which the disease in the arterial canal must have produced during intra-uterine life. Still it cannot be denied, that the too early closure or permanent contraction of the arterial canal would be liable to produce very serious embarrassment to the lungs and right ventricle.

---

* In Dissertat. Med. Select. Pragensis, vol. i. Anat. Partus Capite Monstroso, p. 190, et Tab. A, figs. 4 and 5.

* Traité des Maladies des Enfans Nouveaux-Nés et à la Mamelle, p. 567, Paris 1828, and Atlas, Planche viii. fig. 1.

[To be continued.]

ON THE

PATHOLOGICAL CHARACTERS OF THE BLOOD,

As it exists in the State of the Sanguiferous System, usually designated Anæmia.

By William Camps, M.D. Edinb.
Physician to the Farringdon General Dispensary.

In a series of papers on the Blood, recently published in the London Medical Gazette, I have treated of the pathological characters of this fluid as it exists in Cancer, Phthisis, Pulmonalis, the Exanthemata, and the Pyrexiæ; and also, in one paper, on its characters during the various periods of Utero-gestation. I am much pleased to find that several gentlemen of high attainments in the sciences of physiology and pathology, and of deservedly corresponding eminence in the profession as physicians and surgeons, have most favourably received and commented upon them.

In continuing still further this series, I propose in the present paper to treat of the pathological characters of this fluid, in that state of the sanguiferous system usually denominated Anæmia.

Provided the words we employ in our writing, and in discourse or conversation, correctly convey to others exact representations of the ideas present in our own minds, so that we may be perfectly and clearly understood in our meanings, it is far from desirable to alter existing nomenclature; but as I contend that the word Anæmia properly denotes bloodlessness, and should only be applied to a state arising from excessive loss of blood, in which the entire mass of that fluid is diminished, I would much prefer the application of the term Spanæmia, denoting poverty of the blood, to such cases of disease, as we so frequently meet with in practice. *This word Spanæmia is* employed in this sense by some German writers and physicians, and, amongst others, I believe by Dr. Schönlein and the late Dr. Simon, of Berlin.

Perhaps it may not be assuming too much to advance the opinion that the essence of this diseased state, commonly designated Anæmia, consists in a diminution, either absolute or relative, of the proportion of the red corpuscles of the blood; consequently a state, both as it respects its symptoms and the composition of the blood, the reverse of Plethora.

In stating the physiological proportion of the red corpuscles of the blood to be represented by the figures 127·0, we shall find that, in Anæmia, the proportion has been occasionally observed to be so small as to be represented by the figures 28·0—a proportion so far below the normal standard, that it is surprising that life could be sustained with such a deviation from the healthy state of this fluid. I mention this instance on the high authority of Mons. Andral, whose veracity, both as an observer and a recorder of physiological and pathological facts, is not to be doubted.

Mons. Andral found, on analysing the blood in 16 cases of incipient Anæmia, that the proportion of the red corpuscles of the blood was 109; and, in 24 cases of confirmed Anæmia, it was only 65; whilst the lowest proportion he has ever observed in the human subject was in that case just now mentioned; that is, the extremely low proportion 28. In a memoir entitled "Researches on the Composition of the Blood in certain Domestic Animals in Health and in Disease," by Messrs. Andral, Gavarret, and De La Fond, they state that in sheep, which are disposed to a state of Anæmia, they found in one of these animals the proportion of the red corpuscles of the blood much lower than 28; namely, so low as 15. If it be correct, as is stated, that the blood of man contains, in its physiological state, more red corpuscles than that of sheep, this diminution of the red corpuscles to 28 in the human subject suffering from Anæmia, may, proportionally considered in relation to the physiological condition of the blood, be almost as great a diminution as that of 15 observed in the sheep affected with the same disease. I do not find any positive record of the analysis of the blood in Anæmia by other observers: certainly none have examined this fluid in this state so thoroughly and repeatedly as Mons. Andral. The late Dr. Simon, of Berlin, says distinctly that he has not analysed the blood in any cases of Anæmia; and merely records in his Animal Chemistry that it is usually described as clear, viscid, and watery.

"If the clot forms at all, it is soft, small, and diffluent; the fibrine, after separation by whipping, is not tough and firm, but soft and viscid, and in the same state as it exists in the chyle." In true Anæmia, or that which results from loss of blood, the red corpuscles are the only elements of the blood observed to be diminished; this is the first effect of hæmorrhage: but Mons. Andral remarks that, if the hæmorrhage increase, or be frequently repeated, the blood soon begins to be impoverished in its other principles, and not only the red corpuscles, but the fibrine and the albumen of the serum, are observed to be diminished. He gives an example of this in the case of a female, who had suffered severely from repeated and abundant uterine hæmorrhage. On analysis, the blood of this female was found to contain only—

	Parts.
Of red corpuscles of the blood . .	21·0
Of fibrine	1·8
Of solid matters of the serum, including albumen	61·0
Whilst the water, in 1000 parts, reached as high a proportion as .	915·0

In ordinary spontaneous Anæmia also, the red corpuscles are the only principles of the blood which are diminished. The fibrine and the solid matters of the serum maintain their normal proportion. Thus, in the 16 cases of incipient Anæmia recorded by Andral, he found the mean proportion of fibrine to be 3·0; and in the 24 cases of confirmed Anæmia, it was represented by the figures 3·3. In a former paper on the Characters of the Blood during various Periods of Utero-Gestation, I have called attention to the fact that, in that state of the female, the blood, in respect of the proportion of the red corpuscles, is in a condition very analogous to Anæmia. Indeed, Utero-gestation is one of those modifications of the organism, which exerts a manifest influence on the composition of the blood. Here the red corpuscles are the only principles of the blood observed to be diminished; whilst the fibrine and the albumen of the serum remain unaffected, or, if either of these two principles be affected, it is the proportion of the fibrine which has been observed to be increased.

Reasoning from facts observed to be connected with the composition of the blood during Utero-gestation, I think it will be in my power, in a subsequent paper, to throw some light on certain states or processes which the female undergoes during that period, and which hitherto remain enveloped in obscurity, or, at least, but imperfectly known, understood, or explained.

It is, I think, probable that further researches on the chemical constitution and physical characters of the blood in Anæmia will open up to us, the cause or causes of the very frequent co-existence of this state of the sanguiferous system, with defective or suppressed menstruation, or even, in some cases, with non-appearance of the menstrual discharge. Whilst, *à priori*, we might have been led to conclude, that the cessation or suppression of a regular habitual discharge from the system, of a fluid analogous to blood would produce, or be attended with, a condition approaching to Plethora, how much more frequently, in this country at least, do we find, that the condition of the female co-existing with the cessation or suppression of this discharge, is one the very opposite of Plethora; namely, the disease now under consideration—Anæmia. For one case of Plethora connected with suppression of the menses, I will venture to affirm, that we shall meet with a dozen cases of Anæmia.

Anæmia is not confined to females. The male sex is sometimes, but not so frequently, affected with this disease. In such cases, Mons. Andral has observed that the red corpuscles of the blood only suffer diminution; the fibrine and the solid matters of the serum, including the albumen, remain unaffected. Long exposure of the system to the influence of lead produces a similar result—an anæmic condition, and, in such cases, Andral has observed that, as regards the chemical constitution of the blood, its red corpuscles are greatly diminished; the fibrine and solid matters of the serum, including the albumen, remaining unaffected as to th

Somewhat in opposition to the description of the physical characters of the blood in Anæmia, quoted above from Dr. Simon's Chemistry of Man, Mons. Andral describes them in the following manner:—The clot, instead of being soft, is, on the contrary, remarkable for its density; its particles cohering closely, and not unfrequently, a well-marked buffy coat is found on its surface. The density of the clot, and the buffy coat covering it, are greater in proportion to the degree of the Anæmia.

Tommasini, an Italian observer and writer, (*vide* Tommasini, sull' Inflammazione), who, with many others, maintained that the presence of the buffy coat upon the clot was a certain indication of the presence of inflammation, because he found the buffy coat covering the clot in blood drawn from chlorotic patients, asserted that Chlorosis was an inflammation of the lymphatic vessels. Burserius, one of the older physicians and writers, on the other hand, contended that the presence of the buffy coat over the clot was not necessarily an indication of existing inflammation, as it was found in blood drawn from anæmic or chlorotic subjects; and Andral has long maintained the same opinion. The explanation offered by him is, I think, perfectly satisfactory, which is, that the presence of the buffy coat, in such cases, is due to an excess in the proportion of the fibrine over that of the red corpuscles of the blood—precisely the conditions which are found to exist, on repeated analyses of the blood in cases of Anæmia.

It would extend the present paper too far beyond its proper limits, to do more than simply allude to a phenomenon connected with this state of the blood, and which is made known to us by auscultation. I allude to the Bruit de souffle or Bruit de diable so constantly observed in anæmic patients, and which appears to be closely connected with the diminution in the proportion of the red corpuscles of the blood, as it is found to be present in Anæmia, Chlorosis, and in Utero-gestation, and sometimes, although by no means so constantly, in some other diseases, both acute and chronic.

There are interesting facts recorded *on this subject, but* which cannot well be introduced into the present communication.

50, Green Street, Grosvenor Square,
Dec. 15, 1846.

ON THE

USE OF TOBACCO IN THE TREATMENT OF TETANUS.

By B. Travers, Jun. Esq.
Assistant-Surgeon and Lecturer on Surgery at St. Thomas's Hospital.

In forwarding you the following case for publication, I think it right to intimate that I do not blindly advocate the use of tobacco in traumatic tetanus. I can confidently state, however, that I have never seen an instance wherein it failed for a time to check and mitigate the violence of the spasm; and I have now witnessed its operation in many cases.

I have to urge against the objection or argument founded upon its frequent ultimate failure, which cannot be denied, that it has succeeded in a larger proportion of instances than any other remedy ever yet tried or suggested. The present is the third case wherein I have seen tobacco save life in traumatic tetanus; and, in a valuable statistical notice, to be found in Mr. Blizard Curling's Treatise, we learn that "of nineteen cases in which tobacco was employed nine recovered." p. 168.

Like all essentially nervous diseases, tetanus, apart from the effects of treatment, kills by exhaustion—sometimes primary, sometimes remote. A skilful surgeon knows that, after allaying spasm, he has still much to do; the triumph is but half achieved. Open bowels, appetite, and active support, are means quite as essential to the required end as repose, or the removal of a local irritant. The fatality of lock-jaw is proverbial. I have before me the particulars of seventeen cases, and I must have seen others during the past fifteen years. Of the above seventeen, twelve died, and five recovered. Of the latter, two were decidedly modified by hysterical symptoms. One, a child, was profusely salivated under the late Mr. Tyrrell in this hospital. The remaining two were treated with tobacco; and the present case constitutes, at least, the third instance of the happy operation of that herb within my own knowledge in this formidable disease.

Case of Tetanus.—W. S., æt. 22, of Newcastle, a fireman on board the "London Merchant" steam-boat, got his left foot entangled in the gear of the engine-pump at sea, which caused extensive laceration of integument, and comminuted fracture of the two outermost metatarsal bones. Much blood was lost at the time; and the part was temporarily dressed with a balsamic application and bandage. He was admitted into Henry's Ward on the 10th of July, the accident having occurred on the 8th. He was attacked with spasm on the 20th inst. Symptoms commenced in the ordinary manner, with stiffness of the jaw, difficult mastication, epigastric tenderness, and subsequent spasm, affecting all the voluntary muscles with progressive violence.

22d.—Tr. Cannabis Indic. ♏xx. 4tis; Porter, Oij.; P. Jalap cum Hydrarg. ℈j.

23d.—Aug^r Tr. ad, ♏xxx. Wine, ℥vj.; eggs, arrow-root, extra diet, and beer as before.

25th.—Aug^r Tr. ad, ♏xl. 3â quâque horâ. Up to this time the foot was supported by a pillow, the parts being sedulously poulticed; but the patient was in no respect better.

On Sunday, the 26th, being 18 days, and 6 days respectively from the receipt of the injury and occurrence of spasm, I removed the broken bones by disarticulation at their tarsal extremities, having first picked away the sloughs which lay on the surface in a pool of pus. Two ligatures and cold water dressing were applied. These measures were followed by some relief of the jaw. ℞ Calomel, gr. v.; Pulv. Antimon. Tart. g. ¼.; Brandy, ℥iv.; beef-tea, Oij. Vesp. Mustard poultice "epigastrio" where he complained of increasing pain, aggravated by pressure. Yesterday a catheter was tried; but the spasm was too great to admit of its introduction. The pulse, after operation, was 130. In the afternoon he passed urine, but no stool. The spasm did not return until 11 P.M. A second M. S. C. enema produced copious stool about 11 P.M. Continues to pass urine freely. At midnight, Enema Tabaci, ʒss. ad Oss. statim.

27th, 12½ A.M.—Enema produced great faintness and cold sticky sweat, with faltering pulse, a relaxation of spasm, and abdominal pain; pulse 116, small. At 11 P.M. urines freely; pulse 100; great rigidity and epigastric tenderness, but no spasm.

Tetanic symptoms recurring without permanent abatement, though there were intervals of repose, the tobacco was employed as follows:—On the 28th, ʒj. ad Oj.; 29th, ditto; 30th, ʒss. ad Oss. A poultice was now applied to the sore, and subsequently plaister, which, however, was withdrawn, as causing too much irritation. 27th, Tr. Opii, ♏l.; beef-tea, &c. as before. 28th, Cascarilla, with Ammon. and Hyoscyamus, was given, and subsequently withdrawn, as it seemed to provoke or rather increase the gastric irritation. 29th, Calomel, gr. v. 31st, Vespere, Calomel, gr. v.; Opii, gr. jss. During the above period of four days, which was a critical time, his rest was much broken.

28th.—He protruded his tongue rather better; and the pulse fell manifestly.

29th.—He was better in all respects; pulse 94; urine is drawn off twice a day as a precaution, the spasm no longer interfering with the operation.

Aug. 1st.—The jaw was more lax. Mustard poultice "epigastrio," morning and evening, for half an hour. Morphiæ Muriat. gr. j. vespere.

2d.—Bowels confined; water retained; is not so well; Morph. gr. ¼ n. et m.

3d.—Passed a good night; no action from the bowels. ℞ Enema M. S. C. At 4 P.M., ℞ Calomel, gr. iij.; Opii, gr. j. statim. Subsequently the bowels were relieved, and he showed more disposition to take nourishment than heretofore.

4th.—I ordered him Liquor Opii Sedativ. ♏xx.; Infus. Cascaril!. ℥ss.; M. Camphoræ, ℥ss., t. d. s. and a double dose at night, making forty minims of Battley horâ somni.

On and after the 5th he began to mend permanently, and in a marked manner.

8th.—He urined freely.

13th.—He could masticate, and took nourishment greedily; bowels and bladder acting naturally and regularly; all spasm and numbness have subsided for some days; motions still stiffly and slowly performed; sweats profusely; pulse 80, and tranquil; tongue clean.

16th.—A week has elapsed since the spasm and trismus began definitively to subside. In the interval, the daily progress has been most marked and uninterrupted. The nights are tranquil, and the appetite for broth and semi-solids, with beer and wine, very great.

29th.—Patient convalescent, quoad constitutional disease. The opiate had been gradually reduced to ♏x. (Battley) bis die; hodie (29th) ♏x. horâ somni. Sore contracting, and healthy. The patient is rapidly acquiring flesh, and soon afterwards he left the house. The foot-stump was still granulating healthily, and nearly well.

Note.—Since the daily use of opium the bowels and bladder have regained their ordinary power and function. Prior to this time the bladder required artificial relief twice, or once at least, per diem, the fluid being scanty and high coloured. Its retention seemed always to aggravate gastric pain and abdominal tension, which were at times very great, calling for the frequent application of mustard and injections per anum, without which no action could be obtained at all at such times. A remarkable numbness of the right lower extremity supervened upon the cessation of spasm in the part; but this symptom gave way after a time under the benign action of the opiate.

CASE OF
ULCERATION OF THE LINING MEMBRANE OF THE UTERUS.

By C. B. Rose, F.R.C.S. &c. Swaffham.

[Communicated by Dr. J. C. W. Lever.]

M. W., an agricultural labourer's wife, aged 46, had a large mass of hydatids removed from her uterus in 1837, after having experienced repeated hæmorrhages, which had greatly reduced her strength.

In the spring of 1842 I was requested to see her, and found her confined to the bed, having an offensive purulent *discharge from the womb, occasionally accompanied with shreds of coagulable lymph, which had existed more or less* from the time of the removal of the hydatids, unaccompanied with much pain. Her general health was bad. I prescribed for her a stomachic tonic medicine, with a generous diet, and desired her to sit up as soon as she found herself able, that the discharges might more readily pass away. I also ordered a nitric acid lotion (Acidi Nitrici, gtt. iij.; Aquæ, ℥j.) to be injected into the *uterus* daily. This plan of treatment was steadily persevered in for several months. In the course of a few weeks after its commencement the discharge was considerably lessened, and her health decidedly improved. Her convalescence continued slow, but the improvement was progressive, so that in the following year her general health, and that of the uterus, were so far restored that she became pregnant, and in the early part of the year 1844 she gave birth to a fine healthy babe, made a good recovery, and suckled her infant.

From this period I lost sight of her till the first week in October of the present year (1845), when I was again requested to see her; and I then learnt that, about Midsummer last, she began to experience hæmorrhages from the uterus; also slight pains and bearings down; but the hæmorrhage was the pressing symptom, it recurring daily, either liquid or coagulated, accompanied with an excessively fœtid and putrid discharge. I found her confined to the bed, her countenance blanched, but not exhibiting the characteristic hue of carcinoma. I examined the uterus per vaginam, and found the os sufficiently open to admit of the passage of two fingers readily; it was smooth, soft, and flabby. The uterus was low down in the pelvis, so that I could pass my finger quite into the body of it, which I found somewhat capacious, and its interior, as far as I could explore it, felt remarkably *ragged and soft.* The examination produced so free a hæmorrhage, that I thought it right to forego a more extended investigation. I recommended an aluminous lotion to be injected into the uterus, and gave the gallic acid internally; but the course of the disease was not in the slightest degree arrested, and she died on the 29th of November.

In the absence of a post-mortem examination (which I could not get permission to make), I feel disposed to consider the above case to be an instance of that very rare uterine disease, of which a specimen was exhibited by Dr. F. H. Ramsbotham at the Pathological Society of London, on the 16th of November, and reported in the MEDICAL GAZETTE of the 27th.

The fact that my patient had been the subject of an hydatiform growth in the uterus, and subsequently of a long-continued morbid state of the lining membrane of that viscus, leads me to the conclusion that the *fons et origo* of the fatal malady may be dated from the period of the former abnormal states, in conjunction with a predisposition in the constitution to intractable disease; and I feel that conclusion to be somewhat confirmed by the following remark of Dr. Ramsbotham, in the concluding observations on "An anomalous case, assuming many appearances of pregnancy," published in his most excellent "Practical Observations in Midwifery," Part 2, page 428:—"I think it extremely probable that the large and comparatively sudden deposition of the liquor amnii in the preceding pregnancy, was connected with the existence of this disease in its incipient state, *and that the uterine membrane never attained a state of perfect health after the expulsion of its last contents.*"

December 8, 1846.

VAGINAL ENTEROCELE COMPLICATING LABOUR.

I RECENTLY attended a woman in labour with vaginal enterocele, an account of which was published in Professor Huston's Medical Examiner, of October 5, 1844.

Mrs. R., aged about 30 years, the mother of four children, all of whom were born by easy, natural labours, and one of them in a labour of two hours, was seized with the parturient pains at half-past eleven o'clock last night. She was at full term, and in good health, save that she had complained much of an unusual pain in the right side of the abdomen, and particularly in the right iliac region. Her physician, Dr. Bicknell, was called to the charge of the case. Dr. B. discovered a tumor occupying the cavity of the pelvis, which impeded the progress of the labour. The woman's pains were frequent and violent, and attended with the most excessive tenesmic effort at bearing down. Dr. B. invited me to see the patient, and I arrived at 2 o'clock P.M. The external parts were in a relaxed state. The index finger used in touching, was pressed towards the symphysis pubis by the tumor, which seemed to fill up the pelvic cavity, and effectually to debar the head even from engaging in the superior strait, though the labour had continued already fourteen and a half hours, in the case of a woman who, in other labours, was occupied but two hours with the whole process. I could just conveniently touch the presenting part of the head, which was in the fourth position of the vertex presentation; the os uteri fully dilated; the tumor compressible. I touched by the rectum, and so discovered that the tumor was in the peritoneal cul-de-sac, betwixt the rectum and vagina, but distending that cul-de-sac enormously. The diagnosis could be nothing else, considering the softness of the swelling, than a vaginal enterocele, which I immediately proceeded to reduce. The woman was placed on her left side, the knees drawn up: I introduced all the fingers of the right hand into the passage, and pressed the ends of them against the lower part of the tumor. By keeping up the pressure a short time, during which I repeatedly exhorted the woman to be passive and not to bear down at all, I could cause the whole mass of the swelling to rise up towards the back part of the superior strait. As the mass ascended, it grew smaller, until, on a sudden, the whole tumor slipped beyond the reach of the hand, and was lost. I announced this good fortune to the patient, and exhorted her not to bear down at all with the approaching pain, lest the gut should again relapse. The pain that ensued brought the head nearly through the superior straight, and partially rotated the vertex; the second pain rotated the head, and propelled it on to the perineum; the third brought the vertex considerably beyond the pubic arch; and the fourth expelled a very large and healthy child; after which the placenta came off in a few minutes.

I look upon this as a very interesting case, not merely on account of the rareness of vaginal enterocele in the pregnant female, but as exhibiting the power of such a tumor to suspend and impede the progress of a labour in all other regards natural and healthy. I presume, as so many hours had already elapsed in vain and exhausting efforts by a strong woman, that there was reason to fear a dangerous strangulation or contusion of the displaced bowel, and that it was fortunate for the patient that the intestine could be returned above the plane of the strait. The rapidity with which the head passed through the whole pelvis and the soft parts, as soon as the obstruction was removed, showed conclusively that the vaginal enterocele was the cause of her distress.—Dr. Meig's Notes to the Translation of Colombat on the Diseases of Females.

MEDICAL GAZETTE.

FRIDAY, DEC. 25, 1846.

We have not for a very long period had to record such an excess of deaths in the metropolis above the weekly averages as will be found in our abstract of the Registrar-General's Table at p. 1129. During the excessive heat of the past summer, the mortality was nearly equally high; but the prevalent and fatal diseases were of a widely different character.* For the last few weeks the thermometer has been gradually falling. In the week ending Dec. 5th, the temperature was much below the December average; and the mean at the Greenwich Observatory was 32°—the freezing point of water! In the week ending December 12th, the mean temperature was a little higher, 35·9; but still below the December average. During these two weeks of extreme cold, the mortality rose much above the averages; and, on reference to the Table, we find that the great increase was due to the fatality of diseases of the fourth class; namely, those affecting the organs of respiration. Making full allowance for the difference in the numbers of persons living at different ages, the mortality appears to have been very great among the infantile and adult classes.

	Week ending Dec. 5.			*Week ending Dec. 12.*		
Ages	0 to 15	15 to 60	60 and upwards	0 to 15	15 to 60	60 and upwards
Deaths from diseases of organs of respiration .	126	168	67 = 361	135	190	90 = 416

Autumnal average 313

When we come to examine the diseases which have thus been so extensively fatal, we find that *pneumonia* has been the most prevalent cause of death among infants, *phthisis* among adults, and *bronchitis* among aged persons.

With regard to pneumonia, its fatality among infants can excite no surprise. The mode in which children are freely exposed to a low temperature with clothing insufficient to protect them from the inclemency of the weather, will sufficiently account for the prevalence of this disease. Many parents, even of the better classes, act upon the absurd principle of "hardening" children by thus exposing them to the air when the thermometer is below freezing. Undoubtedly those which survive such discipline, must be regarded as possessing great natural strength of constitution; but it appears to be entirely forgotten that a large number perish in this process of "hardening;" and to this (in many cases preventable) cause, is, we believe, to be ascribed the recent increase of infantile deaths from *pneumonia* and bronchitis. The deaths from *phthisis* among adults were but little above the average of the season. It is well known that a sudden fall in the thermometer speedily proves fatal to those who are labouring under this disease in an advanced stage. The great increase of deaths from *bronchitis* among aged persons, is worthy of the attention of medical practitioners. The deaths from this cause have considerably exceeded the autumnal average during the two weeks. This has probably arisen from an undue

---

* *Deaths in the week ending Saturday,*

Aug. 8	*1135*	*Max. temp.*	110·3°
Dec. 12	*1163*	*Min. temp.*	16·

exposure to cold. The influence of extreme heat and extreme cold in increasing the mortality among infants and old persons, has been most strikingly shown during the present year.

In closing the third volume of the new series, and the thirty-eighth volume of the journal, we have again to express our thanks to our numerous friends and contributors for the able support which has been extended to us. A large portion of this volume is occupied with original lectures and contributions on all subjects connected with practical medicine and surgery: and during the last half year, there have been published reviews and notices of no less than *seventy-six* works by English and foreign medical writers. Our readers will have observed that since the commencement of the present medical session, considerable space has been devoted to the reports of the Proceedings of Societies. Accurate reports, revised by professional men, have been regularly inserted in this journal immediately after each meeting. These Societies are on the increase, and we shall take care that all subjects possessing novelty or professional interest which may be brought before them, shall appear with regularity in our pages. The proceedings of two of these Societies, the Manchester Pathological, and the South London Medical, are reported exclusively in this journal.

The lectures of Sir Benjamin Brodie, Dr. Laycock, and others, will be continued in the next volume.

APPOINTMENT OF DR. M'WILLIAM TO THE BOARD OF CUSTOMS.

Lord John Russell has given to Dr. M'William the valuable appointment of medical attendant to the Board of Customs, recently become vacant. This appointment was conferred in the most handsome manner, without any application on the part of Dr. M'William, Lord John's secretary stating, in the letter which announced it, that the appointment was conferred on account of Dr. M'William's distinguished services in the river Niger, in the year 1841.

Reviews.

The Surgical, Mechanical, and Medical Treatment of the Teeth: including Dental Mechanics. Illustrated with Engravings. By James Robinson, Surgeon-Dentist to the Metropolitan Hospital, &c. 8vo. pp. 320. Webster: London. 1846.

Mr. Robinson's popular exposition of what, if we understand his expression rightly, he considers to be "the secrets of the noble art" of "dentistry," scarcely falls within our province as medical reviewers, a large proportion of its contents consisting of directions for the construction of artificial teeth; his details of the history of diseases of the teeth and jaws conveying little that is new or interesting to the surgeon, however well calculated they may be to attract the notice of extra-professional readers whose minds have just been awakened by the author's eloquent descriptions of the "value and importance" "of those humble and sometimes despised and neglected organs, the human teeth."

We are willing to admit that many of the contrivances recommended by Mr. Robinson in the portion of his work which is devoted to the mechanical treatment of irregularities and diseases of the teeth appear to be ingenious, and that the same amount of praise is probably due to his details of the mode of constructing artificial teeth, &c.; but we regret to add that we do not at all admire the general plan and evident intention of his work. We wholly disapprove of his bad taste in dedicating to the public a work which certainly does not contain half a dozen pages the perusal of which could in the remotest degree concern any non-professional reader, except so far as they convey a very clear idea of the best mode of choosing a dentist of the author's character and knowledge. The profession has long since learned to regard with distrust every species of semi-medical publication wherein attempts are made to initiate the public into the history of systems of medical and surgical treatment, the true rationale of which is as incomprehensible professional men is dangerous and nefarious. A surgeon who attempted to enlighten the public with elaborate descriptions of the most scientific modes of amputating limbs and of extracting tumors would be at once scouted by his profession as a designing charlatan; and the dental surgeon who "explicitly divulges the secrets of his noble art" to a class of readers the limited range of whose powers of comprehension render it necessary that they should be furnished with clear explanations of the precise meaning of such difficult words as "alkaline, alloy, calcareous, febrile, narcotic, osseous, phthisis," &c. &c. (see "Glossary," p. 319) is, to say the least, guilty of a decided violation of professional good taste.

As affording fair examples of the more useful portions of Mr. Robinson's work, we shall quote the following remarks on "*The colour of the teeth as a test of consumption, &c.*" which the author states are founded on close observation:—

> "It has been observed by most authors who have written on the teeth, but more particularly by Dr. C. Harris, of Baltimore, that the teeth of consumptive and scrofulous persons have either a beautiful crystalline appearance, and are of a whiteness almost resembling alabaster, or of a clean pearly character, with the enamel slightly tinged with blue, or frequently of a very pale yellow or orange colour, particularly in the early stages of the disease. As the disease advances, the colour of the teeth is changed, and the osseous structure becomes softer and darker, approaching a deep yellow; still, later on, again, when death is at hand, the structure of the teeth is affected in proportion both in colour and density. In other cases, where I have had opportunities of examining teeth recently extracted from the mouth of a person who died of consumption, and have made sections of them, I have found them peculiarly characteristic of the disease, and contra-distinguished from those of persons who have died of other diseases, inasmuch as a complete softening has taken place, the bone resembling decayed sponge in texture, and being of a darkish orange colour, while in non-consumptive teeth the bone was of a lightish grey, without any change having taken place in density of structure. Observations, however, have not hitherto been made till the disease was confirmed and the patient beyond hope of recovery." *(p. 72).*

A little further on, the author states that, "in all cases in which he has observed the above indications in the teeth of children," he has "found, on inquiry, that either consumption or scrofula existed, though, perhaps, generations back, in the family of one or other of the parents of such children;" and that "since then his first conceptions have too often been realised by these very diseases shewing themselves in the suspected cases."

We cannot altogether reconcile the author's previous declaration that "observations have not hitherto been made until the disease was confirmed and the patient beyond hope of recovery" with the ensuing statement that similar appearances in the teeth have led him to anticipate the occurrence of phthisis in persons in whom that disease was yet latent. Still, as the correctness of these observations may be readily tested, we recommend them to the attention of our practical readers.

Proceedings of Societies.

WESTMINSTER MEDICAL SOCIETY.

Mr. Hancock, President.

Saturday, December 5.

Mr. Hancock related the following

Cases of Disease of the Hip-joint, with Abscess breaking into the Rectum.

Case 1.—William B——, aged eleven, was admitted an in-patient of the Charing Cross Hospital, under his care, on October 8th, 1844, suffering from inflammation of the left hip-joint. He has fair hair, a delicate skin, and is of a strumous habit. His mother stated that she had first observed his lameness about a month before; that she had applied some liniment to the hip; but that, as the pain, &c. increased, she was desirous of further advice. He presented the ordinary symptoms of inflammation of the hip-joint, swelling of the nates, fulness of the groin, apparent elongation of the limb, pointing of the toe, and inability to place the heel upon the ground, with pain upon pressure over the trochanter, or on jarring the limb. He was ordered to be cupped upon the nates to eight ounces, to have warm fomentations applied, to be kept perfectly at rest, and to take the common saline mixture. This relieved him for two or three days, when the pain returning, twelve leeches were ordered to be applied to his groin, and a blister over the hip, and to b repeated as soon as healed. Under treatment, he appeared to be going on favourably for about a month or five weeks, when he complained of pain on the inner part of the knee, and of want of sleep, stating that after having been asleep for a short time, he was awoke by a sharp pain in the joint, which caused him to start with severe aggravation of his sufferings. He was ordered a caustic issue to be opened behind the great trochanter, and to be kept open by the occasional application of the potassa fusa, and to take the saline mixture, with tincture of hyoscyamus, every six hours. This did not, however, arrest the progress of the disease, for in the course of a short time the symptoms of irritative fever became urgent, accompanied with severe rigors, and it was evident that an abscess was forming in the joint. These symptoms lasted for some days, when they subsided; the limb, in the interim, having become shorter from the occurrence of spontaneous dislocation, upwards and backwards, accompanied with increased fulness of the nates, and evident signs of fluctuation; but as his general health did not at this time appear to suffer much, it was thought better to wait for the abscess to burst spontaneously, or, at all events, until there was an opportunity of evacuating its contents, by an opening made at some little distance from the joint, and therefore it was endeavoured to improve his general health as much as possible, and to support him by nourishing diet. He (Mr. Hancock) was subsequently enabled to make a small opening with a trochar, near the insertion of the tensor vaginæ femoris muscle, and withdrew about half the contents of the abscess, amounting nearly to a pint, after which he applied pressure over the hip. As this was not followed by any constitutional disturbance, in the course of a week he made another opening, and allowed the contents of the abscess to drain away entirely, after which a bandage was applied as before, and a splint, made of strong leather, modelled exactly to the thigh, extending from the anterior superior spine of the ilium to the spines of the sacrum, in the one direction, and from the crista ilii to half way down the thigh, in the other, with holes cut in it, corresponding to the opening in the abscess, and likewise to the issue. Under this treatment the discharge gradually diminished, until at length it ceased altogether: the joint became firmer, and he left the hospital, apparently cured as far as was possible, on the 9th of January, 1845, three months after his admission, with instructions to continue the splint.

Mr. Hancock saw nothing of him until the 2nd of Dec. 1845, when he was again brought to the hospital with a large abscess extending over the hip which had burst near to the spot where the other abscess had been opened. He was in such a bad state of health that he at once ordered his admission. He complained of intense pain in the part, in which he could not bear the slightest motion; his face was flushed; tongue white; he had a short, hacking cough, and profuse night-sweats. He was ordered the sulphate of iron, with the sulphate of quinine, thrice daily; and a night draught, with fifteen drops of dilute sulphuric acid, eight drops of liq. opii sed., with infusion of roses; and to have nourishing diet. To be kept perfectly quiet, and a bandage to be applied carefully over the hip. His general health appeared to improve, and the discharge to diminish, for the first three or four weeks, when symptoms of constitutional irritation again manifested themselves, with severe pain in the hip, and it soon became evident that a fresh abscess was forming, which ran its course in a few days, and on the 20th of Dec. burst opposite to the upper part of the left ilio-sacral synchondrosis; this gave him relief for the time, but on the 22nd the hectic symptoms increased; he suffered from continual sickness; pulse very quick, but small; face flushed; complained of great pain in the situation of the last opening, through which, upon examination, Mr. Hancock discovered that fæculent matter escaped. In a week or two he again rallied, but remained in a very precarious condition until the beginning of February, when finding that he became weaker, and that his cough and night-sweats increased, he advised his removal into the country, to give him a chance of recovery, but without entertaining any very sanguine hopes of improvement.

On Tuesday, the 12th of Nov. last, he came to show himself at the Charing-Cross Hospital. He then appeared to be well, with the exception of his leg being shorter than the other. He was stout, the wounds had healed, and he was able to walk about, by means of a high shoe, with perfect freedom from pain, and without the aid of crutches. He said that his appetite was good, that he had no cough, no night-sweats; that, in fact, he felt in perfect health; that he had not been under medical treatment since he left the hospital, but had continued to wear the splint which he then had on. He had returned from the country about a fortnight previously.

He was indebted for the particulars of the following case to Mr. Smith, under whose care it was:—

Case 2.—R. P——, aged thirteen, of delicate conformation, employed by the London and Birmingham Railway Company to attend upon one of their carts, slipped on Monday, the 21st of December, 1844, about mid-day, and sprained his hip-joint; but experiencing little inconvenience at the time, he continued his occupation throughout afternoon. On Tuesday morning (being near Christmas) he was obliged to accompany the carrier as usual, although he complained of pain and uneasiness. In the evening he became worse, had rigor, and an increase of pain, which induced his landlady to put him to bed, and bathe his hip-joint with a lotion of gin-and-water. On the following morning, his mother, who lives at Brompton, was anxious to have him under her own roof. He was removed, and Mr. Smith's attendance requested. Upon his arrival, he found him in bed, with much pain in the hip, the upper portion of the thigh and the knee, the two former aggravated by pressure and motion of the limb. The above symptoms were combated by leeches, fomentations, calomel and opium, and saline medicines, with no avail. The following night he became delirious, and sank on the Saturday following the accident, with all the indications of an ordinary case, although much more acute, of typhus fever. From reading a parallel case in Sir Benjamin Brodie's work "On Diseases of the Joints," he was induced to diagnosticate primary ulceration of the synovial membrane, with effusion of pus into the joint.

On Sunday morning he examined the hip, in the presence of Mr. Chappel. Upon making an incision through the capsular ligament, about a tablespoonful of rather dark pus escaped, and an ulcer the size of a sixpence, not round, but long and narrow, was discovered in the synovial membrane, where it is reflected over the neck of the femur, opposite to the internal surface of the trochanter major. The thorax, &c. were not allowed to be examined.

Fortunately, such cases as the latter were rare, as they proved fatal in so short a period, and resulted from such apparently slight causes; but, at the same time, they presented points of considerable interest, upon which he would beg the opinion of the Society. Sir Benjamin Brodie, in his work on the Joints, had narrated two cases of the same disease,—one in the hip, the other in the shoulder; and in relation to these cases he observed,—"When an abscess has formed in a joint, an ulcerated opening takes place in the synovial membrane, through which the matter is discharged. The following are the only cases which have come under my observation in which ulceration of the synovial membrane has occurred as a primary affection. The most remarkable circumstance which they demonstrate is, that a disease, apparently slight, and of a part which is in no way concerned in the vital functions, should produce such a degree of disturbance to the constitution as to occasion death." Mr. Smith coincides with Sir B. *Brodie, that, in his case,* the patient suffered *from primary ulceration* of the synovial *membrane, with effusion of pus into the joint.* Mr. Hancock was inclined to differ from this opinion, and to consider rhe primary mischief to be either abrasion or laceration of the synovial membrane, and that the appearances of ulceration came on subsequently, and for the following reasons:—

Ulceration must be preceded by inflammation, and consequently the position, that, in these cases, ulceration of the synovial membrane occurred as a primary affection, is untenable, and, moreover, each of these three cases resulted from direct violence. In Mr. Smith's case, the boy slipped, and strained his hip. In Sir B. Brodie's first case, the young lady at play, fell, and wrenched her hip; whilst in his second case, the man had met with a contusion on the shoulder. And, moreover, the situation in which the ulceration appeared in all these cases, was that in which the synovial membrane was most likely to be injured by a violent wrench or contusion, being in the two former, where it is reflected over the neck of the femur, whilst in the latter it was at the spot where it was reflected over the neck of the os brachii. Again, we must be struck with the extreme rapidity with which the symptoms appeared in Sir Benjamin Brodie's first case. The young lady fell in the morning, and was seized with a rigor in the evening, and the next morning she had pain in the thigh and knee. It was therefore fair to presume that ulceration had commenced either before or at the time of the rigor, or within twelve hours from the occurrence of the wrench, previous to which we were led to suppose that the synovial membrane was healthy. This was an unusually short time, it must be allowed, for ulceration and suppuration to occur, unless some wound or abrasion of surface was produced at the time of injury; and he was inclined to believe that this was the case, and that, from the nature of the parts, the patients experienced comparatively slight inconvenience at the moment of injury, and that it was not until the subsequent exercise excited inflammation that the more serious symptoms became manifested. Again, the shape of the wound in Mr. Smith's case would tend to confirm the opinion that the ulcer was traumatic, and not spontaneous, or the result of disease. In almost all spontaneous ulcers the wound is more or less round; but in this, Mr. Smith observes that it was "of the size of a sixpence, not round, but long and narrow:" and, moreover, if the ulcer were the result of disease, would the morbid appearances be so circumscribed; for neither Sir B. Brodie nor Mr. Smith described any surrounding inflammation of the synovial membrane, Sir B. Brodie's account being—"The hip-joint, on the side of the injury, contained about half an ounce of dark coloured pus, and the synovial membrane, where it was reflected over the neck of the femur, was destroyed by ulceration for about the extent of a shilling;" but not a word about inflammation. In the preceding remarks he had endeavoured to prove that the ulcer in this case was not the primary disease resulting from constitutional causes, but a wound arising from injury, and occurring at the moment of the injury. He could not agree with Mr. South, in his remarks contained in his translation of Chelius, "that the ulceration is the result of the pressure of the pus in attempting to produce an outlet;" for it was well known that several ounces of matter may be formed in the hip-joint without any ulceration taking place. In conclusion, the question of treatment was of great importance. That pursued by Mr. Smith was certainly most judicious; but he would suggest the necessity of keeping the limb in the most complete state of rest in the earlier stages, not only by position in the bed, but by encasing the joint in some kind of splint made of leather, starch, pasteboard, or any thing capable of being modelled to the joint, and of preventing the slightest motion in it. There could be but little, if any, doubt that the delirium and symptoms of typhus fever which preceded death resulted from the confinement of the matter within the joint; and he would be glad of the opinion of the Society whether, with the experience of the rapidly fatal termination in these cases, we should not, under similar circumstances, be perfectly justified in cutting down and making an opening in the capsular ligament and synovial membrane, to allow the matter to escape, which he had little doubt would relieve the urgency of the symptoms, and give to the patient a better chance of ultimate recovery, as it appears the patients die from the irritation produced by pent-up ill-conditioned matter, rather than from the extent of actual mischief.

Mr. **Curtis** thought that the inflammation was produced by the injury, and was not constitutional; it would probably not be noticed until considerable. In this case the pus was not sufficient to cause pain by distension.

Dr. **Coley** conceived the first case to be analogous to two cases related by Sir A. Cooper in the *Medico-Chirurgical Transactions*, and thought that the absence of the red particles proved the existence of a peculiar inflammation, like that in ulceration of the cornea and of the teeth. In some cases of hip-joint disease the inflammation begins in the synovial membrane; in others, in the cancelli of the bones.

Mr. **Chance** objected to opening abscesses early in this disease, as they were often absorbed without injury; and referred to a case of Mr. Mayo's, where the cartilages were found healthy on their synovial surfaces, but were separated from the bone.

Mr. **Hird** argued that the first case was one of inflammation in the synovial membrane, causing ulceration of the cartilages, and by degrees working its way to the rectum. The second case was one of laceration of the membrane, and absorption of pus. Had a further examination been allowed, purulent deposits would probably have been found.

Mr. **Hancock** stated that he did not approve of early tapping in general, but thinks that in his second case it would give a chance to a patient of recovery. He considered the typhoid symptoms produced by confined pus, of an unhealthy character, owing to the nature of the inflammation.

Mr. **Hird** thought that the system had already suffered so much that it could hardly recover itself.

Dr. **Sayer** drew attention to the apparent alternation of disease of the hip-joint and of the absorbent glands in successive generations of the same family.

SOUTH LONDON MEDICAL SOCIETY.

December 10, 1846.

Charles Waterworth, Esq. President, in the Chair.

Mr. Crisp read a paper on—

Infantile Pleurisy.

The author, after reviewing the opinions of Underwood, Maunsel, Evanson, West, Baron, and Billard, on this disease, referred to 41 post-mortem examinations he had himself made of children under two years of age (the greater number under 12 months). In 6 cases inflammation of the pleura had been found, and in 5 of these it was combined with pneumonia; in one case it was complicated with pericarditis, in another with peritonitis and hydrocephalus, and in the sixth case the pleuræ alone appeared to be inflamed. Although the character of symptoms in the adult render the disease easily recognized, even without the aid of auscultatory signs, and with these last lead to a pretty certain knowledge of the boundaries and other nice points of diagnosis, yet it must be admitted that in some instances it is more difficult of detection, and is especially likely to escape observation in infantile life, where many valuable signs, obtainable in more advanced life, are wanting. The symptoms observed by the author in infantile pleuritis were—great restlessness, violent screaming at the onset of the attack, very quick pulse, hot and dry skin, glassy eye, dry cough (this not frequent), the head thrown back, and great apparent pain on placing the child erect. On auscultation a dry rubbing sou was heard. Many of these signs may be present in other diseases, as pneumonia, increasing the difficulty of diagnosis; but when the dry rubbing sound is heard, with frequent screaming, and apparent increase of pain on elevating the head, the existence of pleurisy is pretty clearly indicated. If, in addition, mucous and crepitating râles are heard, and a small portion of the serous membrane only is inflamed, the diagnosis is more obscure; but it may be recognised by careful investigation. The author then narrated four cases he had seen of infants in whom, although the disease was unsuspected during life, signs of pleuritic inflammation were found on a post-mortem examination. In another child, æt. 10 months, after indisposition for several days, the child was seized with quick breathing, short cough, hot dry skin, quick pulse, and inability to cry aloud (although two days previously it had screamed violently at intervals, as if in pain); a rubbing sound was heard on both sides, especially on the right, of chest; the head was thrown back, and the erect position increased the pain. Notwithstanding depletion, and the exhibition of calomel and antimony every four hours, the child died; and on examination a large deposit of straw-coloured lymph was found on the right pulmonary pleura, in parts one-sixth of an inch thick, with slight adhesions to the costal pleura, but without fluid. Lymph less abundant was found on the left side, with red hepatization of upper portion of the lung. In another child, æt. four months, the symptoms commenced suddenly with a shrill scream, which continued at intervals for nearly twenty hours. The symptoms, on being seen by the author, were hot skin, quick pulse, short dry cough, very quick breathing, glassy eyes, head thrown back, and pain much increased when the head was moved forward; dry rubbing sound indistinctly heard over sides of the chest. Antimonials, calomel, and local depletion, were ordered with temporary relief; but the symptoms gradually became more unfavourble, and the child died. On examination, both pulmonary pleuræ were found covered with straw-coloured lymph, uniting these to the costal pleuræ; the surface of the pericardium was also coated with lymph, but there was no fluid in this or in the pleural cavities. Lungs congested posteriorly, but healthy in structure, as were the heart and abdominal viscera. The disease in the two last cases was detected during life.

The author considered it fortunate that the only diseases with which infantile pleurisy could be confounded, viz. pneumonia and pericarditis, required the same treatment; but would suggest a recourse to more active *measures in pleuritis, if seen in the first stage, than in pneumonia;* and if the case is *seen early, there is* no reason why the disease should not be arrested, and the little patients cured. He had seen two cases lately, in which, from local and general symptoms, pleuritis in an early stage probably existed, and the children convalesced under warm baths, leeches, calomel, and antimony. The author concluded by stating his object in the present communication had been to show—1stly, That infantile pleuritis is not so rare a disease as is generally believed. 2dly, That when inflammation is confined chiefly to the pleura, it may be easily recognized; and that, even when complicated with pneumonia, attention to the auscultatory signs may enable us to detect its existence. 3dly, That when accompanied by pneumonia, or occurring alone, it is a disease of great danger; and that, unless remedies are early applied, it is but little if at all amenable to medical treatment.

In answer to the President, Mr. Crisp said he was not aware that any author had referred to the drawing back of the head in infantile pleuritis, or that signs of this disease had been pointed out.

Mr. M'Donough considered that infantile pleuritis was not found out on account of its not being looked for, and that many of the symptoms mentioned in Mr. Crisp's cases might be due to cerebral affection.

Mr. Robinson had seen many cases, some fatal, some cured. As regarded the condition of the chest in Mr. Crisp's cases, the little suspicious symptoms probably arose from exhaustion not allowing the signs to proceed, and thus the disease became arrested; this is also seen in hooping-cough. There is often combination of other symptoms, and death takes place from exhaustion. He agreed with Mr. Crisp as to the position of the head; he had himself been struck with the forcible way, and length of time, it was held back. The other symptoms mentioned were those of pneumonia generally. In two cases of suspected pleuritis, he had found the pulse sharper than in pneumonia, and had noticed that, if placed on the side suspected of being diseased, the child lies easier than on the other side, and if turned tries to get back to it. In a child, æt. 9, with suspected biliary derangement, the peculiar sharpness of pulse led to the detection of pleuritis of the left side. Pain was not complained of, as is sometimes the case in children, and in strumous habits; but by touching the side the child flinched, and would only lie on the affected side. Depletory measures were used with relief, and œgophony followed; this under the use of blisters and antiphlogistic measures disappeared two days afterwards, and the child was then able to lie on the opposite side.

Mr. Crisp, in answer to the President, stated that Billard mentioned the crying, but did not allude to its incessant character. In his two last cases there was violent screaming, and the pleura was found covered with lymph.

Dr. **Murphy** differed in some of the points alluded to. In regard to frequency the lungs were especially affected in children in cold weather. He had not seen pleurisy uncombined with pneumonia, nor did he think that serous membranes were primarily affected, but became implicated by an extension of inflammation, as was seen in hernia humoralis, &c. He considered tartar emetic too powerful a medicine for children under twelve months, and he did not think calomel would have time to act. A very important remedy had not been mentioned, viz. raising the temperature of the room. He was not in the habit of applying blisters, but used sinapisms, and gave ipecacuanha.

The **President** stated that M. Billard mentioned two cases of pleuritis where the lungs were not involved. Mr. Crisp suggested whether, if he found the pleura coated with lymph, and the lung healthy, except the congestion of the posterior part so often found in children, Dr. Murphy could consider that inflammation existed in the lung. He was quite sure that, in the adult, pleurisy could exist uncombined with inflammation of the pulmonary tissue; and a case was mentioned where, after acute pain for some hours, the patient died, and the inflammation was entirely confined to the pleura.

Dr. **Murphy** would ask, could a patient die of pleuritis alone? Dr. Murphy then proceeded to comment upon the difference between a hepatized and a congested lung; the latter could always be made to float on water, while the former invariably sunk. He had never witnessed pericarditis in a child as a primary affection. When the pleura pulmonalis and costalis were attacked, the former became affected first; but he had always found some sign of pneumonia present in such cases.

Mr. **Crisp** referred to the state of the pericardium in one of his cases; he believed that children sometimes die from the severity of the inflammation, pain, &c.

Dr. **Todd** was of opinion that the pericardium was oftener the seat of inflammation in young than in older persons, and by no means rarely so in infants. He believed that pleuritis was almost always complicated with pneumonia, and supported this position by the analogy of the arachnoid, in affections of which the symptoms arose from lesions of the subjacent brain. The tubular breathing, which was a symptom of pleurisy, arose from consolidation of the lung, either by hepatization or pressure of fluid, most probably the former, as the fluid in the latter case was often too small for such a result. He alluded to the difficulty in distinguishing anatomically between mere congestion of lung and inflammation, and to the possibility of error from such doubt. The converse opinion, that pneumonia was equally often complicated with pleuritis, he did not believe. He believed that pleuritis and pneumonia very rarely occurred as idiopathic diseases, and that their origin could be traced to the introduction of some poison into the blood, which opinion was supported by the fact of their concur-rence at particular times, and during the prevalence of certain diseases, as rheumatism, as also by the pecu-liarity of the symptoms.

Dr. **Barlow** allowed the general concomitance of these diseases, but considered that some subjects were more prone to pleuritis than others, and that pneumonia occurred without pleuritis, and hence that pleuritis might occur without pneumonia; and in one of Mr. Crisp's cases the pleuritis was not in the same part as the inflamed lung. He himself remembered to have seen instances of pleuritis uncomplicated with pneumonia; indeed, if pneumonia always accompanied pleuritis, the latter might be exactly measured by the former, which experience did not prove to be the case. He did not apprehend any difficulty in distinguishing the tubular breathing of hepatized or compressed lung. He considered, with Dr. Todd, that the origin of serous inflammations from humoral causes was much overlooked, and adduced in illustration the complications of renal affections; still they must not be entirely regarded as humoral diseases. He also stated that he had freely used tartarized antimony, and thought that, where proper caution was used, no ill effects would result from its employment.

Mr. **M'Donough** alluded to the character of the breathing in large effusions, and to the circumstance of its being audible only at the spinal region.

Mr. **Robinson** considered the pneumonia usually preceded the pleuritis, and alluded to the difference in symptoms and accession of these diseases.

After which, thanks were voted to the author of the paper.

Previously to the reading of the paper, Mr. Crisp presented the larynx and trachea of an infant, aged 12 months, who had died suddenly from croup. The child had been indisposed for two days with cough and febrile symptoms; croupy sound appeared sixteen hours before death, but the child was only seen by a medical practitioner (Mr. Frederick Crisp) within two hours of its decease. The epiglottis, chordæ vocales, larynx, and trachea, were lined with a layer of false membrane; the mucous lining of the trachea was much congested; the lining membrane of the bronchial tubes was also a little congested, and covered with thick mucus; the substance of both lungs was normal.

Mr. Crisp stated that the specimen did not differ from those ordinarily seen in this disease, but thought the more than usually healthy condition of the lungs and bronchial membrane was a circumstance worthy of note, and rendered it questionable whether tracheotomy, if performed early, might not have saved this child's life.

At the next meeting of the Society, on January 7th, 1847, Mr. Hicks will read a few cases in illustration of the existence of malaria on the Surrey side of the water, with remarks.

Medical Intelligence.

TRICKS OF THE CHIROPODISTS—MANUFACTURE OF CORNS.

(Quasi agnum committere Lupo.)

The Borough of Southwold, Suffolk, was lately visited by a person representing himself, by handbills, as "Dr. Joseph Wolff, a Chiropodist, Pupil of the celebrated F. R. La Grauche, Member of the *Academies* of Paris and Copenhagen, &c. &c., Patronized by the King of Belgium, the Princess Adelaide of France, the Duke of Aremberg," &c. &c. &c.; and having, or pretending to have, testimonials from several Physicians and Surgeons in Derby, Nottingham, and more particularly in Birmingham, as well as from Medical Practitioners and other persons of consideration in those and other towns. The Doctor appears to have lately had a residence in Surrey Mews, in the suburbs of the city of Norwich, from whence he was in the habit of making incursions upon various towns in Norwich and Suffolk, but was somewhat suddenly interrupted in the practice of his vocation, having been deposited in the gaol of Beccles, in Suffolk, through proceedings originating with Dr. Wake, a practising surgeon, and one of the Borough magistrates at Southwold, in which town, in the course of two or three hours, Dr. J. Wolff contrived by his *peculiar practice* to levy £11 or £12 upon three or four of the principal inhabitants, on the pretence of extracting corns from their feet.

From one patient he pretended to extract in about an hour, from only four apparent corns, no less than twenty-five small substances which he called corns, for which he made a charge of £6. 5s. and received £6. By this patient the operator was, on the 1st of the present month, very strongly recommended to Dr. Wake, with a view to his recommending him to any of his numerous friends afflicted with corns; but Dr. Wake, thinking it necessary previous to such recommendation to have some personal proof of "Dr. Wolff's" ability, offered to allow him to operate upon his feet, which *were accordingly operated* upon; and from *four visible corns four* spicular or horny, *bristly, or bony substances*, which the operator pronounced to be corns, were extracted, but for which no charge was made upon Dr. Wake.

Having found ease from the operation upon his corns, Dr. Wake introduced the chiropodist to a friend of his, W. C. Fonnereau, Esq. of Christ Church Park, Ipswich, from whose feet the operator produced four, and from another member of the same family, eight spicula of the same horny, bristly, or bony substances, some being smooth, some somewhat jagged, and some a little curved at the points, upon careful examination of which Dr. Wake began to suspect, and ultimately came to a conviction, that the substances produced had never been generated in a human foot, but were altogether artificial, and had in the course of the operation been first inserted in the opening made in the corn by the artist, and afterwards extracted by him. Under this conviction Dr. Wake came to a determination narrowly to watch the proceedings of the operator. In Dr. Wake's own case the chiropodist had placed himself in such a position that little or nothing of his operations could be seen until the period arrived for extraction, when a broad pair of forceps were taken up, and the operator was seen to make various apparent efforts by which extraction was effected. In the operation upon the feet of Mr. Fonnereau an attempt had been made by Dr. Wake to place himself in a situation to witness the operation, but was he unable to do so from an objection on the part of the operator to his "obstructing the light." The anxiety of the operator to avoid particular observation, of course gave additional strength to Dr. Wake's suspicions that imposture was practised, and on introducing the chiropodist to another of his friends, Dr. Wake took a position where he could watch the operation without being seen but by accident: the operator being made aware that Dr. Wake was watching him, left his seat, complaining that it was too low for him, but after a few minutes, during which he went to another part of the room, returned to the same low seat and finished the operation, proclaiming that he could not find a corn, although he thought that "he had crushed one." In the same house Dr. Wolff had previously operated upon the feet of an elderly gentleman, from which he extracted four imaginary corns, and for which he received his usual charge of five shillings each, and received ten shillings for the barren corns which he only pared.

Dr. J. Wolff's theory appears to be that the bone under what is commonly called a corn throws out corns sometimes in abundance—whence his harvest. It has already been remarked that each visible corn on the feet of his principal patient at Southwold produced five, but we have heard of a lady upon whom this distinguished chiropodist is said to have operated in Ireland, who paid him £8 for thirty-two corns, (*i. e.* five shillings per corn): perhaps the number is unlimited, or limited only by the chance of detection, which is most probable, as the last corns operated upon in Southwold were unproductive, arising no doubt from a consciousness of the imminent danger of detection.

Having satisfied himself that the spicula extracted from the corns had been previously inserted therein by the operator, Dr. Wake considered upon consulting with his legal friends and his brother magistrates that having parted with no money it would be impossible for him to proceed under the Act of the 7th and 8th George IV. cap. 29, for obtaining money under false pretences; yet unwilling that such an impostor should escape made a complaint under the act against rogues and vagabonds, viz. 5 George IV., cap. 83, and his information having been taken, a warrant for the apprehension of Dr. J. Wolff was granted, and the chief officer of the police at Southwold was sent off to Norwich to apprehend him. The Doctor, however, being perhaps alive to the probability of apprehension, was not found by the Southwold officer, and the warrant was left with an officer in the Norwich police, who subsequently apprehended him, and took him off to Southwold, and on Thursday the case was heard before the magistrates at the Town Hall. But in the meantime Mr. Fonnereau, who had paid £3 for the artificial corns extracted at his house, having laid an information under the Act of the 7th and 8th George IV., cap. 29, which the magistrates thought the preferable case to proceed with, it was proceeded with, and the chiropodist sent, as has been already stated, to Beccles Gaol for trial at the next sessions. On the hearing, much was elicited to substantiate the fraudulent pretences: amongst other evidence given was that of a blacksmith, who had seen Dr. Wolff near his shop amusing himself with picking up the parings of horses' hoofs, of which it is supposed that some of his spicula were fabricated!

After the arrest of Dr. J. Wolff it was discovered that he was not a Doctor of Medicine, nor had ever had any medical education, and it had been previously ascertained from the Superintendent of the Constabulary Office at Cheltenham, that two chiropodists had been arrested there on the 9th of October, 1841, and committed to the House of Correction for fourteen days, on a charge precisely the same as that laid by Mr. Fonnereau against Dr. J. Wolff; when *this* was communicated to Dr. J. Wolff, he admitted a *knowledge* of the parties so dealt with at Cheltenham.

PROSECUTIONS BY THE APOTHECARIES' SOCIETY.

In consequence of the journal going to press this week a day earlier than usual, we are unable to do more than state that an important announcement has been just made by the Apothecaries' Society, respecting the prosecution of illegal practitioners of medicine. The society have received good legal opinions, that parties practising as apothecaries without their license, may be indicted for a *misdemeanor*, and punished in a summary and effectual manner: and that it is by no means necessary to carry out against them the expensive process by penalty under the 55th of George III. We shall probably return to the subject next week.

THE ASIATIC CHOLERA.

By intelligence received from Trebizonde, dated November 20th, it appears that the cholera had ceased to commit its ravages at Ispahan, but that it still raged at Schiras and Kirman. This plague has not advanced in the direction of the Caucasus, Tiflis and Erivan are still free from it, and the rigour of the season will prevent its passing the Caucasus. But Europe is threatened with this terrible plague in another direction. After having carried off numbers of the inhabitants of Bussora and Bagdad, it has got to Diarbekir. There is a constant commercial intercourse between this town and Aleppo, and it is much to be feared that it may spread into Syria.

SANITARY REGULATIONS RESPECTING SYPHILIS.

We have heard, upon good authority, that Dr. Ratier, after visiting the principal cities of Europe, has just arrived in London, and has been sent by the French Government to investigate the sanitary regulations for the controlment of syphilis. He is about to visit and inspect the various institutions in the metropolis where syphilis is treated. Dr. Ratier's object in seeking information on this subject is to collect materials for making a report which will be published on his return to Paris.

OBITUARY.

DEATH OF PROFESSOR TOMMASINI.

We have this week to announce the death of the celebrated Italian Professor, Tommasini. He was born at Parma, in the year 1769, and died in that city on the 26th of November last, in the 77th year of his age. Professor Tommasini had for many years enjoyed a European reputation; and he was well known as the originator of peculiar medical doctrines which now form the basis of Italian medical practice. We hope hereafter to be able to furnish some particulars of the life and labours of this eminent man.

On the 14th inst. in Charles-street, Manchester-square, Dr. John Foley.

INDEX TO VOL. III. OF THE NEW SERIES.

Abscess in the neck, Mr. Busk's case of, 123.
Abscess, cases of, treated in St. Bartholomew's Hospital, 504.
Abscess, iliac, Mr. Smith on a case of, 595.
Abscesses, urinary and fistulæ, Mr. Cæsar Hawkins's clinical remarks on, 221.
Abortion, Dr. Griscom's case of, 447.
Academy of Sciences at Leipsic, 218.
Academy of Medicine at Constantinople, foundation of a, 675.
Adams, Mr. on tubercle of the brain in children, 166; case of removal of a soft scirrhous tumor from the soft palate by ligature, 836.
Adhesions of the eyelids to the globe of the eye, M. Petrequin on, 721.
"Adjuster," Dr. G. O. Jarvis on the uses of this instrument, 386.
Adulterated milk supplied to hospitals, 288.
African fever, editorial observations on the question of the contagiousness of, 24.
African fever, remarks on the, particularly as regards its contagiousness, 219.
Age a predisposing cause to cholera, 438.
Air, M. Lassaigne on the composition of, at different heights, in close apartments, 351.
Albumen, can a substance be obtained from, free from sulphur, 264.
Alcoholic liquids, on the absorption of, 319.
Alcoholic liquids, M. Bouchardat on the action of, in different animals, 438.
Alcohol, influence of, upon the secretion of urine, 430.
Alcohol, method of rendering it anhydrous, 942.
Aldridge's, Dr. lectures on the urine, &c. reviewed, 250.
Aldis's, Dr. case of peritonitis, with purulent effusion, 890.
Alexander, Dr. notice of the death of, 308.
Alleged reappearance of the cholera in London, 246.
Alliance of physicians with druggists and quacks, 87.
Allison, Dr. John, on the chlorate of potash as a remedy for profuse salivation induced by mercury, 953.
Amorphous quinine, Mr. Redwood on, 256; note from Mr. Bullock respecting, 307.
Amputation in the Prairies, 343.
Analysis, by Heller, of the urine and blood *in cholera sporadica, 305.*
Analysis, pathological, of the blood, Dr. Zimmermann on the mode of conducting a, 20.
Aneurism, cardiac dissecting, Dr. Todd on a case of, 258.
Aneurism, Mr. Wright on two cases of, cured by ligature of the femoral artery, 689.
Animal magnetism superseded, 1085.
Ankle-joint, Mr. Stapleton's case of compound dislocation of the, 601.
Anniversary meeting of the Provincial Medical and Surgical Association, 432.
Annual report of the Registrar-general—refusal of medical practitioners to sign certificates, 840.
Anthony, Mr. on a method of rendering delicate structures visible, 1032.
Aphthæ, treatment of, by sulphuric acid, 43.
Apothecaries' Hall, lists of gentlemen who have received certificates, 44, 88, 132, 176, 265, 309, 352, 397, 481, 523, 560, 603, 645, 734, 865, 909, 998, 1043, 1086, 1129.
Apothecaries' Society, prosecutions by the, 160, 1108.
Apothecaries' Society, legal question on the license of the, 385.
Apothecaries' Society, remarks on the regulations of the, for 1846-7, 624.
Apoplexy, conformation of the body in persons disposed to, 641.
Apoplexy and hemiplegia, statistics of, 733.
Aquæ ammoniæ, Dr. Maclagan on an impurity occurring in, 80.
Arnott's, Mr. case of tumor in the brain, 984.
Arsenic, blood an antidote to, 437.
Arsenic, M. Dupasquier on the means of removing, from commercial sulphuric acid, 261.
Arsenic, trial for murder by poisoning with, 424.
Artesian wells of London, on the effect of the, 85.
Ashby *v.* Bates, report of the case of, 174.
Ashmead's, Dr. on a case of recovery from gun-shot wounds, 386.
Asiatic cholera, progress of the, 378.
Atmospheric changes, Dr. Laycock's clinical lecture on, as causes of disease, 1043.
Atropine, adulteration of, 641.
Aurists, quack, 50.

Ballingall's, Sir George, introductory lecture to a course of military surgery, reviewed, 808.

Barker's, Dr. address to the medical profession, reviewed, 235.

Basham, Mr. note from, respecting the distribution of prizes at the Westminster Hospital, 392.

Bath Pathological Society, 862.

Baths and washhouses bill, 41.

Beck, Mr. on the nerves of the uterus, reviewed, 713.

Becquerel and Rodier, MM. researches by, on the composition of the blood in the condition of health and disease, 446, 566, 606.

Bell, Dr. Charles, on ruptured chordæ tendinæ of the mitral valve, 35; on apoplectic cysts, 383.

Belladonna, poisoning by, 393, 435.

Belladonna in strangulated hernia, 657.

Benefit societies, degradation of the medical profession by, 776.

Bentley's, Dr. case of cancrum oris, 854.

Bexell, Dr. notice of the death of, 730.

Bile, Dr. Heller on the presence of copper and lead in the, 169.

Bile, on the microscopical characters of, 742.

Births and deaths in the metropolis, 44, 87, 133, 176, 220, 264, 309, 352, 397, 440, 481, 523, 560, 603, 645, 690, 734, 778, 822, 865, 910, 955, 999, 1043, 1086, 1 129.

Bird's, Dr. Golding, case of excessive secretion of earthy phosphates by the kidneys, with long-continued irritation of the stomach, 62; introductory lecture at the opening of the Medical School of Guy's Hospital, 657; on urinary deposits, reviewed, 938.

Bird, Dr. Frederick, on the diagnosis and pathology of ovarian tumors, 943.

Birkenhead Charitable Institution, 81.

Bismuth, employment of, in diarrhœa, 908.

Black, Dr. on the evidence at the Hounslow inquest, 344.

Black, Dr. on the vital statistics of Manchester, 1035.

Bladder, wound of the, 709.

Blood, condition of the, after death from strangulation, 1042.

Blood, Dr. Zimmerman on the mode of conducting a pathological analysis of the, 20.

Blood and the sanguineous contents of the stomach, analysis of the, in a case of land-scurvy, 555.

Blood, Dr Heller on the presence of large quantities of fat in the, 555; on the character of, in malignant affections of the uterus, 777.

Blood, Dr. Camps on the pathological characters of the, as it exists in the exanthemata, 579, 794, 1093; on the characters of the, during utero-gestation, 758.

Blood, M. Magendie on the presence of sugar in the, in a state of health, 599.

Blood, MM. Becquerel and Rodier on the composition of, in health and disease, 448, 566, 696.

Blood an antidote to arsenic, 437.

Blood-corpuscles, Dr. Kœlleker on the, 1085.

Bone's, Dr. inaugural dissertation on yellow fever, reviewed, 676.

Bones, cases of injury of the, treated in the Westminster Hospital, 708.

Benzenberg, M. notice of the death of, 219.

Borgstedt's, Dr. case of recovery from a dose of concentrated sulphuric acid, 81.

Bostock, Dr. note from, respecting passing off old medical works for new, 129.

Bostock, Dr. J. notice of the death of, 306.

Botanic Gardens at Chelsea, 862.

Bouchardat and Sandras, MM. on the absorption and elimination of alcoholic liquids, 319.

Bouchardat, M. on the action of alcoholic liquids on different animals, 438; on a method of detecting the admixture of water with wines, 439.

Bowman's, Mr. case of destructive inflammation of the eye, 754.

Boyd, Dr. on a case of aneurism of the aorta, 949.

Brain, series of cases of central lesion of the, 386.

Brainbrigge's, Mr. case of supplementary spleen, 1052; case of dislocation of the hip-joint, 1004.

Brackenridge, Mr. notice of the death of, 688.

Brenchley, Mr. on the typhus fever in Berkshire, 1082.

Bridgman's, Dr. guide for the proper treatment of the teeth, reviewed, 683.

Bright's disease, Dr. G. O. Rees on the diagnosis of, and its relation to albuminous urine, 102.

Brigham's, Dr. case of removal of seventeen inches of the small intestine, 557.

British Association for the Advancement of Science, abstracts of papers read at the:— Mr. Osborn on the presence of atmospheric air and uncombined chloric acid found in the water of the wells of Southampton, 551; Mr. Grove on the decomposition of water into its constituent gases by heat, 552; Dr. Laycock on the diseases resulting from the immoderate use of tobacco, 593; Dr. Wright's observations on the same subject, 592; Dr. Letheby on the differences in the physiological actions of the yellow and red prussiates, 593.

Brodie, Sir Benjamin, on the employment of carded wool in some cases of senile gangrene, 39; on varicose veins of the forearm, 172; on the treatment of subcutaneous nævi, 216; on the effects upon the system of the generation of putrid matter in sloughing of the cellular membrane, 396; introductory discourse on the [illegible]

of investigating the sciences belonging to the medical profession, 603; lecture on distortion of the spine not connected with caries, 999,
Bronchitis, case of, cured by the presence of a cherry-stone in the air-passages, 685.
Brown's, Mr. remarks on bursal disease of the knee-joint, and on ganglions, 797.
Broeckx's, M. memoir on the invention of the obstetric forceps, reviewed, 422.
Burrows, Dr. George, on the conformation of the body in apoplectic persons, 641.
Burrows, Dr. George Mann, notice of the death of, 818; memoir of, 1038.
Busk's, Mr. case of abscess in the neck, 123; case of congenital deficiency of the left kidney, 125; on a peculiar form of granular kidney, 857.

Cæsarean operation, results of the, 351.
Calculus vesicæ in the female, Mr. Crawford's case of, 819.
Camps, Dr. on the pathological characters of the blood as it exists in the exanthemata, 579, 794, 1093; on the characters of the blood during utero-gestation, 758.
Cancer of the breast, clinical lecture on, by Mr. B. Phillips, 601.
Can females legally act as dentists? 87.
Caoutchouc gloves for dissecting purposes, 634.
Carcinoma of the uterus, Dr. Renaud's case of, 34.
Cardiac diseases, Mr. Hunter on the diagnosis of, 344.
Caries of the teeth, Dr. Orpen on the treatment of, 554.
Carded wool, Sir Benjamin Brodie on the employment of, in some cases of senile gangrene, 39.
Carpenter's, Dr. principles of human physiology, reviewed, 1024.
Cassell's, Dr. case of aneurism of the ascending aorta, 995.
Castor-oil, method of preventing the nausea produced by, 511.
Cataract, Dr. Watson on the cure of, 208.
Cataract, congenital, in both eyes, Dr. Dock's case of, in which one eye was operated on successfully, 418.
Cavendish Society, foundation and objects of the, 434.
Cazenave's, Mr. lotion for disease of the skin, 246.
Ceely's, Mr. case of malignant fungoid disease of the tongue, communicated, with remarks, by Mr. Lawrence, 915.
Cell development, theory of, 511.
Cerebral congestion, Dr. Rowland's remarks on, 489, 530.
Cervix femoris, Dr. Hanmann's case of, 342.
Chambers', Dr. case of hydatid cyst of the liver, 363.
Chambers', Dr. T. K. observations suggested by *two cases of loss of language*, 540.
Chambers', Dr. Thomas, case of diabetes mellitus, with observations, 731.
Chevers', Dr. collection of facts illustrative of the morbid conditions of the pulmonary artery as bearing upon the treatment of cardiac and pulmonary diseases, 189, 276, 369, 452, 699, 744, 828, 961, 1068.
Chelius on the treatment in cases where foreign bodies have been swallowed, 263; system of surgery, reviewed, 630.
Cheltenham General Hospital, 862.
Chemical equivalents of organic substances, 1038.
Child-murder, trial for, 897.
Children, Dr. Coley on the diseases of, 924.
Chlorotic anæmia, diagnosis of, 115.
Chlorosis, employment of the tannate of iron in, 728.
Charitable institutions in France, 306.
Cherry-stone, sojourn of a, for nine months in the air-passages, 73.
Chiropodists, tricks of the, 1107.
Cholera, progress of the, 82.
Cholera, alleged reappearance of the, in London, 246.
Cholera in London, appointment of two members of the Academy of Medicine, to watch the progress of the, 307.
Cholera, Mr. French's observations on, 328.
Cholera, sporadic, in Paris, 351.
Cholera, Dr. Copland on the progress of, 341.
Cholera, age a predisposing cause to, 438.
Cholera in India, 476.
Cholera in Scinde, treatment of, by the natives, 510.
Cholera, disappearance of, in Persia, 511.
Cholera, Dr. Copland on the infectious nature of, 517.
Cholera in Holland, 554.
Cholera, Mr. Hunter on the contagion of, 595.
Cholera, progress of, in the East, 598, 1108.
Cholera, Dr. Searle on the treatment of, 596.
Cholera, Dr. Coley on the treatment of, in children, 752.
Cholera, Asiatic, advance of the, towards Europe, 817.
Cholera in Persia, fatality of the, 842.
Cholera, Mr. Thomson on the contagious propagation of, 952.
Cholera, Asiatic, progress of, in the East, 954.
Cholera, alleged appearance of, in Syria, 997.
Circulation, notes respecting the claimants to the discovery of the, 248.
Clairvoyance, astounding instance of, 686.
Clark, Sir James, on the sanative influence of climate, reviewed, 469.
Clay, Dr. on the use of inspissated gall, reviewed, 337.
Climate and diseases of Jersey, Dr. Sharkey's short notes of, during 1845, 538.
Clinical observation, Dr. Thomas Laycock on the value and nature of, 141.

Cock's, Mr. Edward, case of strangulated hernia, 849.
Coffee, M. Payen's analysis of, 511.
Coley, Dr. on passive congestion of the uterus, 492; on scirrhoidal disease affecting the adherent surface of the mucous membrane of the vagina and cervix uteri, 415; treatise on the diseases of children, reviewed, 678; on the diseases of children, 752, 924.
Cold, effects of the application of, to the skin, 308.
College of Physicians, gentlemen admitted members of the, 599.
Collieries, editorial observations on the report of explosions in, 116.
Contagious diseases prevention act, 306, 817.
Contagiousness of African fever, editorial observations on the question of the, 24.
Converts to homœopathy, 871.
Copper and lead, Dr. Heller on the presence of, in the bile, 169.
Copland, Dr. on the progress of cholera, 341; on the infectious nature of Asiatic cholera, 517; on the contagious propagation of cholera, 952.
Copper and arsenic, M. Walchner on the presence of, in all ores of iron, 763.
Corrosive sublimate, incompatibles with, 101.
Coroners' inquests, resolutions respecting, at a meeting of medical practitioners at Nottingham, 258.
Coroner, editorial observations on the appointment of medical men to the office of 976.
Coroners, editorial remarks on the mode of electing, 1314.
Coroners, editorial suggestions for the improvement of the office of, 1062.
Court-martial, a medical, 728.
Counsel, license of, and the cross-examination of medical witnesses, editorial observations on the, 68.
Crawford's, Mr. case of calculus vesicæ in the female, 819.
Crawford's, Dr. case of phagedænic ulceration of the genitals, 960.
Criminal lunatics, Dr. Mayo on the treatment of, 194.
Crisp, Mr. on a case of rupture of the left ventricle of the heart, 857; on a case of omental hernia, ib.
Croup membrane, Dr. Seitz on the composition of, 522.
Croup, Mr. Hird on the nature and treatment of, 988.
Cumming, Mr. on a luminous appearance of the human eye, 124.

Davies', Dr. W. S. G. case in which a musket-ball was accidentally swallowed, 686.
Davies, Dr. Herbert, case of communicating ulcer between the stomach and colon, 856.
Davies', Dr. Henry, account of two labours of a dwarf, 983.
Day, Mr. on the late inquest at Hounslow, 346.
Death, alleged, from military flogging, 218.
Deaths, false registration of, 396.
Deaths, Mr. May's table of, occuring in private practice, 837.
Delirium tremens, case of, in an infant, 554.
Delirium tremens, death from—charge of manslaughter, 811.
Delirium tremens, clinical lecture on, by Mr. B. Phillips, 867.
Dendy, Mr. on the influence of lactation on the health of infants, 852.
Dental physiology and surgery, Mr. Tomes's lectures on:—
  Lect. 8.—Irregularity in the position of the whole of the front teeth—irregularity in the central incisors, in the lateral incisors, and in the canine teeth—irregularity in the bicuspides and molares—irregularity in the position of the wisdom teeth, and the consequent diseases, 7.
  Lect. 9.—Osseous union of teeth to each other—union of teeth to the alveoli—mechanical injuries—fracture of teeth—fracture external to the pulp cavity—through the pulp cavity—through the fangs—union of fractured teeth—dilaceration of teeth—injuries of the pulp—dislocation of teeth — fracture of the alveoli, 95.
Dentist's (a) circular, 598.
Deputy-vaccinators, danger of, 128.
Derosne, M. notice of the death of, 599.
Desecration of the dead in metropolitan churchyards, 800.
Dick, the late General, case of, 131.
Diabetes mellitus, Dr. T. K. Chambers' case of, with observations, 751.
Diabetes, Mr. Pilcher's case of, 683.
Diagnosis of chlorotic anæmia, 115.
Diarrhœa, employment of bismuth in, 908.
Diarrhœa infantum, prevalence of, 954.
Difficult labour, Mr. Eton's twin case of, 152.
Dissection, caoutchouc gloves recommended during, 634.
Dissection, editorial observations on the deficiency of subjects for, 882.
Dislocation, clinical remarks by Mr. Cæsar Hawkins on cases of, 222.
Dislocations, old, Mr. Syme on the reduction of, 602.
Distortion of the spine not connected with caries, 999.
Dixon's, Mr. remarkable case of injury to the eye, 983.
Dick's, Dr. case of congenital cataract in both eyes, in which one eye was operated on successfully, 418.
Domville, Dr. notice of the death of, 45.
Driver's, Mr. case of malposition of the kidney, 193.

Dropsy of the liver, Dr. Francis's case of, 34.

Druggists, caution to, 923.

Duflos, M. on the separation of the iodides and bromides, 215.

Dumas, M. on the chemical composition of milk, 375.

Dumville's, Dr. case of cancer of the bladder, 213; on nerve ganglions after amputation, 383; case of retroversion of the uterus, 548; two cases of spina bifida, 549; case of paralysis of the gullet, 848.

Dupasquier, M. on the blue colour of light transmitted through gold leaf, 259; on the means of removing arsenic from commercial sulphuric acid, 260; on the effects of phosphorus vapour, 511.

Dysentery and hepatitis of India, Dr. Parkes' remarks on the, reviewed, 28.

Dysentery, epidemic, at Mechlin, 817.

Dysmenorrhœa, Dr. Oldham's observations on two forms of, 919, 970.

Eager's, Dr. case of basilar artery ending fatally, 384.

Editorial Articles:—Is the African fever contagious? 24; license of counsel, and the cross-examination of medical witnesses, 68; report on explosions in collieries, 117; prosecutions by the Apothecaries' Society, 160; correspondence respecting the quarantine laws, 201; alleged reappearance of the cholera in London, 246; state of the public health in the metropolis, 288, 335; the new medical registration bill, 331; the sanitary congress and the laws of quarantine, 375; the sale of medicines by medical practitioners, 417; regulation of the profession, 466; on the alleged necessity for re-vaccination, 494; results of interment in towns, 496; the medical schools for 1846-47, 543; effects of intra-mural interments on public health, 581; regulations of the Apothecaries' Society for 1846-7, 624; necessity for preventing interment in towns, 673; the objections of the Society of Apothecaries to the medical registration bill, 710; appointment of unqualified persons to the office of house-surgeons in dispensaries, 769; the payment of medical officers to benefit societies, 761; desecration of the dead in metropolitan churchyards, 800; seventh annual report of the Registrar-general—refusal of medical practitioners to sign certificates, 840; twelfth report of the Poor-law Commissioners, 881; subjects for dissection, 882; medical certificates of insanity, 931; Health of Towns' Association, 935; on the appointment of medical men to the office of coroner, 976; on the mode of electing coroners, 1015; *suggestions for the improvement of the office of coroner, 1062; state* of public *health in the metropolis, 1099.*

Egan, Dr. on syphilis, as contracted from nursed children, 478.

Electricity and Magnetism, Prof. Faraday's lectures on:—

Lect. 2.—The two kinds of electricity; repulsion; the electroscope; transference of electricity; insulated ball; destruction of the two forces; difference between heat and electricity; insulation; conduction; relative conducting powers of brass, wood, and glass; effect of humidity on the conduction of bodies; conducting power of metals; velocity of electricity compared with other velocities; accumulation of electricity; induction; properties of induced electricity; tendency of electricity to the exterior of bodies; transferred from the inside to the outside of a vessel; principle of the Leyden jar; mode of construction; discharge of electricity; sparks; electricity not self-luminous; its action on metallic conductors; effects of lightning; ignition of bodies; cold fusion; lightning conductors; electricity passes from every portion of a conductor, 1—7.

Lect. 3.—Chemical affinity; action of copper on nitric acid; decomposition by equivalents; oxidation of zinc; variable affinities for oxygen; relations of chemical affinity to heat and electricity; precipitation of copper on iron and silver; Voltaic phenomena; transference of electro-chemical power; conductors and non-conductors of current electricity; how affected by the current; action of Wollaston's pair of plates; intense heat produced; construction of the Voltaic pile; its power in the original and improved apparatus compared; decomposing action in one direction; Grove's battery of forty pair of plates; action of the current on charcoal; vacuum light produced without combustion; combustion of silver; ignition of platina; effects of the current on a compound wire of platina and silver; combustion of mercury and iron; the current arrested by sulphur, phosphorus, and other non-conductors; conducting power increased by cooling; platina melted by cooling part of the conducting wire on ice; slight effect of current electricity on the electroscope; low intensity of the current; action of water; chemical action of the battery and machine contrasted; quantity of electricity from the machine small, its intensity great; the reverse in the battery; measurement of the relative effects of electricity from the machine and battery, 89—95.

Lect. 4.—Magnetism: The loadstone or magnet; its action on iron; persistence of the power; points of action; attraction and repulsion; difference between the magnetic and electric attractions; communication of magnetic power; artificial magnets; the horse-shoe magnet; iron a conductor of magnetism; polarity; natural magnets; difference of property in soft iron and steel; compound magnets; repulsion of similar, attraction of dissimilar poles; transference of power; analogy to electricity; only two active points; multiplication of active points by division; on magnetism by induction; influence at a distance; temporary magnets; magnetic curves or lines of force; the dip of the magnet; current of terrestrial magnetism; cause of the dip; points north and south; variation of the compass; magnetic polarity induced in iron by percussion; power of magnetism exerted through all substances which are not magnetic, 177—182.

Lect. 5.—General differences between the electricity of the machine and battery; between electricity and magnetism; early attempts to discover the relation of these powers; Oersted's discovery in 1819; attraction of the magnet by machine electricity; effect of current electricity; its action on the needle; divergence right or left according to position with respect to the current; water magnetised by the passage of the current; its influence on the needle; use of the galvanometer; the principle of its action explained; the Astatic galvanometer; an electric current proved to be produced by contact of two metals with the tongue; by contact of metals with hot milk; also in other cases; the mutual effect of electricity and magnetism a tangential and not an attractive or repulsive force; electro-magnetic motion of bodies; a peculiar character of this motion; differs from all other natural phenomena; the moving power and moving bodies carried round together, 265—270.

Lect. 6.—Electro-magnetism: Reciprocal influence of electrical and magnetic forces; production of one from the other; iron magnetised by being placed at right angles to the course of the current; effect of the helix in accumulating power; reversal of the poles of magnets by the current; different actions of the current on soft iron and steel; power retained by steel, lost by soft iron; power of an electro-magnet; no magnetism conveyed by the current to other metals; rules for obtaining a maximum effect; polarity of the arrangement; the current apparently gives power but loses none; its chemical force the same with or without the production of magnetic force; proved by the quantity of water decomposed being equal in the two cases; the current a test of the purity of soft iron; production of poles and their multiplication by fracture; enormous masses of iron sustained by the electro-magnet; increase of power in bringing the two poles together; difference between horseshoe and bar magnets; inductive power of the electro-magnet; magnetic repulsion of similar poles; magnets for observatories made by the current; demonstration of the curves of magnetic force; explanation of the dip of the magnet; indifference to other metals; identity of electricity and magnetism: power of the machine battery compared with that of the current; enormous difference in the quantity of electricity in the two cases, 353—358.

Lect. 7.—No loss of electricity in the production of magnetism; production of electric force from the magnet; magneto-electric phenomena; when and how produced; effects on the galvanometer; the same effects from temporary magnets; electrical phenomena from the magnetism of the earth; magneto-electric machines; principles of their action; their great power in generating electricity; formed of conducting materials; lines of magnetic force; motion produced by magneto-electricity; the force inexhaustible; the moving power in the machine itself; various forms of apparatus; effects of the magneto-electric current; magnetic sparks; heat produced by it; shocks; inductive action of currents; effect of a disk of copper on the vibrations of a magnet; effect of a revolving disk of copper on the magnet at rest; cause of these phenomena; modifications of the apparatus; effect of a powerful magnet on a heavy bar of copper in motion; on a revolving plate of brass; diamagnetic phenomena; electric currents obtained from terrestrial magnetic currents; cause of the aurora borealis and australis, 441—447.

Lect. 8.—Magnetism: The subject continued; slow advance of science; form of a powerful electro-magnet; its power illustrated by experiments; magnetic curves formed in the air; effect upon an iron chain; magnetic bridge of iron; no attraction of lead and some other metals; magnetised paper; new property of magnets; illustrated by bismuth; repulsion of this metal by the poles; magnets attract some bodies, and repel others. phosphorus repelled by the magnetic current; diamagnetism; all bodies attracted or repelled; the latter class most numerous. lists of magnetic and diamagnetic bodies, diamagnetic properties of water; substances, whether liquid, solid, or pulverulent, point axially or equatorially; magnetic and diamagnetic properties of air in different liquids; vegetable substances, if longitudinal, diamagnetic; magnetism of the earth; phenomena of

the dipping-needle; source of magnetic attraction near the centre of the earth, not at the poles; relation of diamagnetism to terrestrial magnetism; conclusion of the course, 523—529.
Electrical machine, Dr. Letheby's description of a new, 858.
Emetics, on the use of, in cases of exhaustion, 128.
Empyema, Dr. Fisher's case of, communicating with the abdomen, 642.
Epidemic, singular, in France, 350.
Ergotine as a styptic in wounds of arteries, 260.
Erichsen's, Mr. introductory lecture on the opening of the Westminster Hospital Medical School, 668.
Erysipelas, nitrate of silver in, 544.
Esdaile, Dr. on mesmerism in India, reviewed, 419.
Eton's, Mr. twin case of difficult labour, 152.
Evans, Mr. on diseases of the labia, 113.
Evans's, Dr. pathological propositions relating to phthisis, 821.
Expectoration, muco-purulent, Mr. Hunter on, 217.
Explosions in collieries, editorial observations on the report on, 116.
Extirpation of the uterus, results of, 201.

Faraday's, Professor, lectures on magnetism and electricity, *see* "Electricity and magnetism."
Fat, M. Köss on the formation of, in the animal body, 689.
Fatty degeneration of the heart, Mr. Meade's remarks on, 785.
Fees from a pasha, 86.
Fees to medical witnesses in France, 258.
Femur, Mr. Welsh's case of unsuspected dislocation of the, 416.
Fergusson's, Dr. notes and recollections of a professional life, reviewed, 118.
Fever, Mr. Tuckwell on the use of the preparations of iron in, 173.
Fever, African, editorial observations on the question of the contagiousness of the, 24.
Fever in and near Nottingham, 727.
Fever in Berkshire, outbreak of, 998.
Fibrine, Dr. Zimmermann on the action of the salts which dissolve, 67.
Fish-book, removal of a, from the œsophagus, 504.
Fisher's, Dr. case of empyema communicating with the abdomen, 642.
Fistula, intestinal, case of, cured by compression, 601.
Fletcher's, Dr. notes on cruelty to animals, reviewed, 1024.
Fodéré, inauguration of a statue to, 580.
Fordos and Gelis, MM. on the action of sulphur upon potash, soda, and their carbonates, 438.
Fourcault, M. on the hygiène of persons predisposed to chronic disease, 759.
Fracture, compound, case of, of the skull, treated in St. Bartholomew's Hospital, 78.
Fracture of the cervix femoris, Dr. Hanmann's case of, 342.
Fracture of the fore-arm, Mr. May's case of ununited, 487.
Fractures, straw-splints for, 556.
Fracture of the neck of the thigh-bone, Mr. Pittard on, 904.
Fracture of the cranium, Mr. Harvey's case of, with depression and subsequent hernia cerebri, 871, 927.
Francis's, Dr. case of dropsy of the liver, 34; case of aneurism of posterior communicating artery of the brain, 213; case of death from rupture of arteries at the base of the brain, 387; case of cancer of the pylorus, 548; case of four semilunar valves, 847.
Franks, Mr. on urino-genital diseases, reviewed, 888.
French Scientific Congress, 45.
French view of English medical journalism, 219.
French medical students, 729.
French's, Mr. observations on cholera, 328.
Fuller's, Mr. case of enormous enlargement of the spleen and liver, 123, 404.

Garrod, Dr. election of, as physician to the Royal General Dispensary, Aldersgate Street, 307.
Gases in sea-water, 729.
Gastralgia, Dr. Bertini on the use of subnitrate of bismuth in, 437.
Gaubrie, Dr. notice of the death of, 730.
Generation, organs of, Mr. Snell's case of extensive laceration of the, 622.
Genitals, case of phagedænic ulceration of the, 960.
Geoffroy, St.-Hilaire, statue to, 435.
German Hospital, anniversary of the, 729.
Gestation, Dr. Leray on the natural period of, 494.
Gillard's, Mr. William, case of traumatic tetanus, successfully treated, 263.
Golding, Dr. on the diagnosis of disease of the heart, 431; case of gangrene of the right lung, 986.
Gosport duel case, acquittal of Lieutenant Hawkey, 174.
Gower, Mr. on the scientific phenomena of human life, reviewed, 1026.
Graham, the late Dr. biographical sketch of, 379.
Graham's, Professor, Elements of Chemistry, reviewed, 845.
Grantham, Mr. on the diagnosis and treatment of rupture of the tendon of the triceps cruralis muscle, 670; case of rupture of the tendon of the rectus femoris, 775.
Gregory's, Dr. elements of the theory and practice of medicine, reviewed, 713.
Griffith's, Dr. practical manual, reviewed, 682.

Griffith's, Mr. chemistry of the four seasons, reviewed, 888.
Grigor's, Mr. case of hermaphroditism, 646.
Griscom's, Dr. case of abortion, 447.
Grove, Mr. on the decomposition of water into its constituent gases by heat, 552.
Gums, fatal hæmorrhage from lancing the, in an infant, 85.
Gun-cotton, notice of Schonbein's discovery of, 351; invention of, 724; observations on, by M. Pelouze, 862; Dr. Nevins' objections to the use of, in fire-arms, 907; explosive properties of, 1037.
Gun-shot wounds, Dr. Ashmead on a case of recovery from, 386; case of, in which the projéctile was lodged in the body for twenty-seven years, 423.
Guy, Dr. on the health of towns, 168.
Guy's, Dr. W. A. lecture on medical education, reviewed, 981.

Hæmorrhage, fatal, from lancing the gums of an infant, 85.
Hæmoptysis, Dr. Morris on, occurring in infants, 480.
Hamilton's, Mr. case of successful application of the matico leaf in a case of obstinate hæmorrhage, 521.
Hand-book for bathers, reviewed, 589.
Hanmann's, Dr. case of fracture of the cervix femoris, 342.
Hare's, Mr. cases of angular projection of the spine, 106.
Harvey, Dr. life of, 730.
Harvey's, Mr. case of fracture of the cranium, with depression and subsequent hernia cerebri, 871, 927.
Harveian Medical Scoiety, officers for the current session, 729.
Harveian oration, delivered at the College of Physicians by Dr. Elliotson, 42.
Hassall's, Mr. microscopical anatomy of the human body, reviewed, 381.
Hawkins, Mr. Cæsar, clinical lectures:—incarcerated inguinal hernia, 45; strangulated femoral hernia, 46; caries and ulceration of intervertebral substance, 133; cases of paraplegia, 134; urinary abscesses and fistula, 221; cases of dislocation, 222; paraplegia, 309; disease of the joints of the foot, 310; lacerated wounds, 313; excision of the ovarium, 735.
Head, case of severe injury to the, 787.
Health of towns' bill, 43.
Health of towns' bill, remarks on clauses 175 and 176.
Health of Towns' Association, meeting of the, 863.
Health of Towns' Association, interview of the, with Sir James Graham, 935.
Health and sickness of town populations considered, review of a pamphlet recently published, 980.
Health, public, state of the, during the spring quarter, 261; present state, 1099.
Heart, Dr. Golding on the diagnosis of diseases of the, 431.
Heaslop, Mr. notice of the death of, 642.
Health, public, state of the, in the metropolis, 204.
Heller, Dr. on the presence of copper and lead in the bile, 169; on the internal and external employment of nitrate of silver, 170; analysis of the urine in dropsy after small-pox, 215; on the urine, blood, and dropsical fluid, in morbus Brightii, 316; analysis of the urine, blood, fæces, and vomited matters, in cholera sporadica, 395; on the presence of large quantities of fat in the blood, 513; analysis of the urine in land scurvy, 314, 555; analysis of the blood and the sanguineous contents of the stomach, in a case of land-scurvy, 555; on the character of the blood in malignant affections of the uterus, 777.
Hepatic and pulmonary circulation, a contrast of the, 129.
Hepatic cells, structure of, 757.
Hernia, strangulated, belladonna in, 657.
Hernia, umbilical, M. Meynier on the treatment of, 617.
Hernia, strangulated, Mr. Edward Cock's case of, 849.
Hernia, strangulated, Mr. C. Hawkins's clinical lecture on, 45.
Herapath, Mr. on the action of camphor on the teeth, 996.
Hewett's, Mr. case of large fibrous polypus of the small intestine, 854.
Hewett's, Dr. two cases of encephaloid disease of the heart, 889.
Higginbottom, Mr. on the employment of ipecacuanha in emetic doses as a powerful restorative in some cases of exhaustion and sinking, 37.
Highmore, Mr. on Mr. Grantham's case of rupture of the tendon of the rectus femoris, 775.
Hints for pedestrians, by Medicus, reviewed, 210.
Hip-joint, Mr. Bainbrigge's case of dislocation of the, 1004.
Hip-joint, Mr. Cæsar Hawkins on disease of the, 133.
Hip-joint, Mr. Skey on the treatment of bursal disease of the, 364.
Hird's, Mr. case of rupture of the bladder from external violence, 770; on opium in inflammation, 852.
Holden's, Mr. Luther, clinical reports of surgical cases treated in St. Bartholomew's Hospital, 77.
Holmes', Mr, George, substitute for a hernia knife in the operation of strangulated hernia, 477.
Homœopathy, discussion on, at the London Medical Society, 640.
Homœopathy, a compromise with, 729.
Homœopathy, converts to, 871.
Homœopathic congress in London, 687.
Honeywood, Mr. notice of the death of, 8

Hooper's, Dr. physician's vade-mecnm, reviewed, 211.
Hospital and infirmary reports:—
St. Bartholomew's, 77, 504.
King's College, 423, 722.
Westminster, 671.
Hospital gangrene, Dr. Moore on, 1035.
Hospital St. Jean, at Brussels, 511.
House-surgeons in dispensaries, appointment of unqualified persons to the office of, 759.
Hounslow inquest, Dr. Black on the evidence at the, 344.
Humboldt's, Baron, Cosmos, translated by Col. Sabine, reviewed, 978.
Human bones, exhumation of, 307.
Hunter, Mr. on muco-purulent expectoration, 217; on the diagnosis of cardiac diseases, 344; on the contagion of cholera, 595; on the treatment of cases of alleged pleuro-pneumonia, 814.
Hydatid cyst of the liver, Dr. Chambers on a case of, 363.
Hydatid formations, Professor Klencke on, 643.
Hypochondriasis, Dr. Laycock's clinical lecture on, 779.
Hysteria, convulsive, Dr. Renaud's case of, 214.

Identity, mistaken, singular case of, 350.
Ichthysis fortuita, case of, treated in University College Hospital, with the decoction of the root of the rumex obtusifolius, with remarks by Dr. A. T. Thomson, 35.
Inflammation, Dr. George Robinson on the nature and principles of treatment of, 14, 65, 243, 410, 535, 704, 1008.
Inflammation, destructive, of the eye, Mr. Bowman's case of, 754.
Incompatibles with corrosive sublimate, 101.
Injury to the spine, cases of, treated at St. Bartholomew's Hospital, 79.
Iaman's, Dr. case of softening of the pons varolii, 389.
Inoculation for pestis bovina, 195.
Insanity, increase of, in France, 328.
Insanity, exemption of the Cherokee Indians and Africans from, 465.
Insanity in children, Dr. Woodward on, 559.
Insanity, medical certtficates of, editorial observations on, 931.
Insects, tenacity of life in, 641.
Interment in towns, objects of the measure introduced into Parliament by Mr. Mackinnon, 307.
Interment in towns, results of, 497.
Interment in towns, results of magisterial investigation, 508.
Interments, intra-mural, effects of, on the public health, 581.
Interment in towns, editorial observations on the *necessity for preventing*, 673.
Interment in towns and desecration of the *dead, 726.*
Intermittent fevers, M. Nepple on the types of, 438.
Iodides and bromides, M. Duflos on the separation of the, 215.
Ipecacuanha, Mr. Higginbottom on the employment of, in emetic doses, as a powerful restorative in some cases of exhaustion and sinking, 37.
Iritis in infancy, Mr. Walker on, 1014.

Jackson, Mr. notice of the death of, 439.
Jaundice, varieties in, 529.
Jay's, Mr. case of placenta prævia, 344.
Johnson's, Dr. George, microscopical and chemical examination of a kidney affected with morbus Brightii, 953; on a case of congenital malformatiou of the pelvis, 951.
Joints of the foot, Mr. Cæsar Hawkins on disease of the, 310.
Jones, Mr. C. H. on the structure of the salivary glands, 59.
Jones, Mr. T. Wharton, on a newly-discovered ganglion of very simple form and structure, 836.
Jones, Dr. Bence, on a case of extensive extravasation of blood in the brain, 951.
Joseph, Mr. on the blood, reeiewed, 808.

Kennedy's, Dr. case of re-vaccination followed by untoward symptoms, 515.
Kennedy, Dr. on the epidemic cholera, reviewed, 1068.
Kidney, the human, Mr. Toynbee on the internal structure of the, and the changes which its several parts undergo in Bright's disease, 32.
Kidneys, Dr. Golding Bird on a case of excessive secretion of earthy phosphates by the, with long-continued irritability of the stomach, 62.
Kidney, Mr. Driver's case of malposition of the, 193.
Kirby's, Mr. two cases of aneurism cured by ligature of the femoral artery, 689.
King, Mr. T. W. on physiological and pathological tensions, and on glandulæ pacchioni, 21.
King's College, meeting for the purpose of providing a larger hospital in connection with, 41.
King's College Hospital, state of its funds, 218.
Kirkpatrick's, Dr. case of removal of a fish-hook from the œsophagus, 504.
Kirk's, Mr. case of sloughing of the penis, 623.
Knapp, Professor, on the influence of science upon the progress of national industry, 74.
Knee-joint, Mr. Richard on the treatment of bursal disease of the, 510.
Knee-joint, Mr. Brown on bursal disease of the, and on ganglions, 797.
Knight, Sir Thomas Grey, M.D. notice of the death of, 219.

Kœlleker on the blood-corpuscles of the human body, 1084.

Köss, M. on the formation of fat in the animal body, 689.

Kramer's, Dr. contributions to aural medicine, reviewed, 162.

Kystein, Dr. Zimmerman on the composition of, 451.

Labia, Mr. Evans on diseases of the, 113.

Lacerated wounds, Mr. Cæsar Hawkins on the treatment of, 313.

Land-scurvy, Dr. Heller's analysis of the urine in, 555; of the blood and contents of the stomach in, ib.

Lane's, Mr. Life at the water cure, reviewed, 498.

Langstaff, Mr. notice of the death of, 396.

Language, Dr. T. K. Chambers' observations suggested by two cases of loss of, 540.

Lapointe, Dr. notice of the death of, 818.

Lassaigne, M. on the composition of air at different heights in close apartments, 351.

Latham, Dr. G. election of, as assistant-physician to the Middlesex Hospital, 997.

Latour, M. on the effects of the application of cold to the skin, 308.

Lavoisier, proposed publication of the works of, 260.

Lawrence's, Mr. William, remarks on a case of malignant fungoid disease of the tongue, 915.

Laycock, Dr. Thomas, lecture on clinical observation, 141; clinical lecture on summer diarrhœa, cholera, and typhus fever, 227; on the diseases resulting from the immoderate use of tobacco, 590; introductory lecture delivered at the opening of the York Medical School, 613; clinical lecture on hypochondriasis, 779; on scrofula, 911, clinical lecture on atmospheric changes, as causes of disease, 1043.

Lead-colic, antidotal treatment of, 728.

Lectures, attendance at, 476.

Leeches, fraud in the sale of, 799.

Leeches, presence of, in the fountains of Algeria, 877.

Lee's, Mr. Edwin, practical observations on mineral waters and baths, reviewed, 886.

Leeson, Mr. on Liebig's physiology, reviewed, 767.

Leicester Infirmary, meeting of subscribers to the, 598.

Leprosy in China, 727.

Leroy, Dr. on the natural period of gestation, 494.

Letheby, Dr. on the differences in the physiological action of the yellow and red prussiates, 592; description of a new electrical machine, 858.

Lever's, Dr. case of rupture of the uterus, 946.

Lichen, prurigo, and impetigo, M. Cazenave on the nature of, 881.

License of counsel, and the cross-examination of medical witnesses, editorial observations on the, 68.

Lippich, Professor, on the treatment of aphthæ by sulphuric acid, 43.

Liebig's, Professor, chemistry and physics in relation to physiology and pathology, reviewed, 843; animal chemistry, reviewed, 1018.

Liebig and his discoveries, 975.

Lightning, death from, 351.

Lightning, on the post-mortem appearances after death from, 513.

Lilly, Mr. notice of the death of, 954.

Litharge plaster, extemporaneous preparation of, 28.

Liston's, Mr. practical surgery, reviewed, 679; case of stricture of the œsophagus, 774.

Lithotrity in the female, Dr. Warren's case of, 1058.

Lithotomy in the female, Mr. Syme's case of, 821.

Lithotomy, Dr. Warren on the bilateral operation of, and on lithotomy in the female, 575, 794.

Liver, Dr. Francis's case of dropsy of the, 34.

Liverpool health of towns' advocate, review of the, 249.

Logwood, tincture of, as a test for bicarbonate of lime in spring water, 954.

London sanitary committee, formation of a, 547.

London hospital, summary of in-patients admitted into the, in the year 1845, 306.

Long's, Mr. case of strangulated congenital hernia, occurring in a child six weeks old, and requiring operation, 171.

Lotion for diseases of the skin, 246.

Lowe's, Mr. Septimus, reports of cases treated in University College Hospital, 35, 126.

Lunatics, criminal, Dr. Mayo on the treatment of, 194.

Lunatic asylum at Vienna, 219.

M'Cormack, Dr. on the phosphorescence of the human body, 617.

Maclagan, Dr. on an impurity occurring in commercial aquæ ammoniæ, 80.

Mackness, Dr. moral aspects of medical life, reviewed, 810.

Maclagan's, Dr. case of congenital opacity of the cornea, 172.

Madden's, Dr. homœopathy viewed in connection with medical reform, reviewed, 884.

Magendie, M. on the presence of sugar in healthy blood, 599.

Malgaigne's, M. manual of operative surgery, reviewed, 936.

Malapraxis, action for alleged, 42.

Malapraxis in a case of strangulated hernia, charge preferred by a physician against a surgeon for, 634.

Malaria from rice plantations, 1048.

Manchester Medical Society, office-bearers for the ensuing session, 750.

Manchester Pathological Society, papers read at the :—Dr. Watts on microscopical pathology, and the use of the microscope in the diagnosis of disease of the lungs, 33; Dr. Francis's case of dropsy of the liver, 34; Dr. Renaud on ulcerated carcinoma of the uterus, ib.; Dr. Charles Bell on ruptured chordæ tendinæ of the mitral valve, 35; Dr. Watts's case of large cavity in the lung, 211; Dr. Francis's case of aneurism of posterior communicating artery of the brain, 213; Mr. Dumville's case of cancer of the bladder, ib.; Mr. Wilkinson's case of carcinoma of the bladder and urethra, 214; Dr. Renaud's case of convulsive hysteria, ib.; Dr. Watts's case of disease of mitral aperture, 381; Dr. Charles Bell on apoplectic cysts, 383; Mr. Dumville on nerve-ganglions after amputation, ib.; Dr. Eager's case of aneurism of basilar artery ending fatally, 384; Dr. Renaud's case of peritonitis, ib.; Mr. Dumville's case of retroversion of uterus, 548; Dr Francis's case of cancer of the pylorus, ib.; Mr. Dumville's two cases of spina bifida, 549; Mr. Whitehead's case of menorrhagia with fatal hæmorrhage, ib.; Dr. Reid's case of aneurism of the aorta, 550; Dr. Renaud's case of apoplectic mole, 551; Dr. Watts's case of aneurism of the arch of the aorta in process of cure, 846; Dr. Francis's case of four semilunar valves, 847; Mr. Dumville's case of paralysis of the gullet, 848; Dr. Watts's case of acute endocarditis, 991; Mr. Whitehead's case of cauliflower disease of the uterus, 992; Dr. Wilkinson on the conversion of large muscles into bone, 983; Dr. Cassels' case of aneurism of the ascending aorta, 995.

Mania, acute, treatment of, 728.

Martin, Dr. notice of the death of, 818.

Marsh, Mr. notice of the death of, 43.

Marshall's, Mr. case of sudden death, 942.

Markwick's, Mr. substitute for poultices and fomentation cloths, 723.

Mark produced by the umbilical cord during delivery, note from Mr. David Price, 40.

Matico leaf, successful application of the, in a case of obstinate hæmorrhage, 521.

Mayo's, Dr. record of cases, 194.

May's, Mr. case of ununited fracture of the forearm, 487; case of cerebral disease, 390; report of the in-patients of the Royal Berkshire Hospital, reviewed, 250; table of deaths occurring in private practice, 837.

Measles, prevalence of, at Antwerp, 998.

Measles in the Faro islands, 83.

Meade's, Mr. manual for students, reviewed, 292; remarks on fatty degeneration of the heart, 785.

Medical education in Spain, expenses of a, 1038.

Medical Jurisprudence, Mr. A. S. Taylor's lectures on:—

Lect. 6.—Certain evidence of death before putrefaction; cases of slow access of putrefaction; presumptions of murder; determination of the period of death from the state of the body; questions relative to the presumption of survivorship; inferences relative to suicide and murder; case of the Prince de Condé; detection of criminals by reference to the period of death, 183—188.

Lect. 7.—On the determination of the period of death after the access of putrefaction; unsatisfactory results of observations yet made; on the period of death in drowned subjects; inferences from the progressive changes produced by the immersion of the body in water; singular case involving a question of death by drowning within a certain period; cross-examination of medical witnesses; on the earliest period at which adipocere may be produced in the drowned; identity of mutilated bodies; the exhumation of skeletons; evidence of the cause of death after eleven years' interment; case of Eugene Aram; circumstances which require notice on the disinterment of bones; inquest in a case of mistaken sex in a skeleton, 271—276.

Lect. 8.—On the exhumation of skeletons; questions which may arise respecting the identity of bones; on the frequent occurrence of animal with human bones; identity determined by the teeth; the bones of animals mistaken for those of human beings; popular ignorance on this subject; case; general distinctions between the bones of mammalia and those of man; identity of fragments: use of the microscope in these investigations; determination of the sex in skeletons; difficulty before the age of puberty; general differences between the male and female skeletons; peculiarities of the female pelvis; determination of the period of interment of bones; decomposition retarded; changes produced in bones after interment for long periods; presence of iron in the shell; preservation of the teeth; determination of age; the development of the teeth in young subjects; peculiarities of the first set; rules for determining the age by the teeth; also by the progress of ossification in the body; characters of bones in the young, adult, and aged person, 397—403.

Lect. 9.—Exhumation of bones; necessity for examining the jaws; remarkable case of contested identity determined by the teeth; on the determination of the stature from the skeleton; average stature; the measurement of one or tw long bones will not suffice; length of the principal bones in adult male and female skeletons; differences in the skeleton according to race; characters of the negro skull; traces of fractures in bones; case of identity involving the period required for the reproduction of bone; marks of disease or deformity; identity established by the presence of supernumerary bones; deformities of the spine; examination of bones which have been calcined; identity established from an examination of the hair, 481—486.

Lect. 10.—Presumption of survivorship; remotely connected with the subject of medical jurisprudence; survivance after severe wounds and from poisons; presumption of death from long absence; in cases of life insurance; presumption of survivorship among persons of different ages and sexes; case of General Stanevix; legal decisions and rules of law; American cases; principles of the Roman law; medical assumptions; survivorship of mother and child during delivery; of husband and wife; medico-legal questions connected with age in the living; period for the development of virile power; disappearance of the procreative power in males and females through age; Banbury peerage case; appearance of the menstrual function in females; age for pregnancy; precocious puberty; legal relations of the subject. Minority, 561—566.

Lect. 11.—Minority continued; age for making wills; for consenting to marriage; age of females in relation to rape and abduction; the date of birth; importance of this question; legal attainments of majority; effect of age on criminal responsibility; exception with respect to rape. Identity in the living; medical evidence in relation to this subject; identity from the form of wounds; personal peculiarities; identity from the form of an ecchymosis; established by the mutilation of a finger; cases of mistaken identity by resemblance of features; comparative tests; utility of medical evidence on these occasions; Stuart's case; execution of a person under mistaken identity; identity of persons from the flash of gunpowder; general remarks, 823—828.

Medical Society of London, papers read at the:—Dr. Hughes Willshire on a new era in therapeutical inquiry, 594; discussion on homœopathy, 640; Mr. Pilcher's case of diabetes, 685, 719; Mr. Hird's case of rupture of the bladder from external violence, 770; Mr. Hird on opium in inflammation, 851; Mr. Dendy on the influence of lactation on the health of infants, 852; Dr. M. Hughes' case of disease of the chest, 892, 945; Dr. Golding's case of gangrene of the right lung, 986; Mr. Pilcher's case of extensive carcinomatous disease, 989.

Medical officers of the Indian army, neglect of the services of, by Government, 130.

Medical schools, remarks on the credit system in, 476.

Medical schools for 1846-47, prospects of the, 543.

Medical assistants, causes of the inadequate remuneration of, 641.

Medical registration bill, the new, editorial observations on the, 331; postponement of the, 394.

Medical ethics, state of, in France, 498.

Medical police, postponement of the bills in reation to, 351.

Medical fees, preliminary stipulation for, in Glasgow, 86.

Medical witnesses, fees to, in France, 258.

Medical journalism, a French view of, 219.

Medicated milk, 43.

Meeson, Dr. notice of the death of, 688.

Medicine, important points in, 907.

Medicines, editorial remarks on the sale of, by medical practitioners, 417.

Meynier, M. on the treatment of umbilical hernia, 617.

Meteorological summary, 44, 87, 133, 176, 210, 265, 309, 397, 440, 481, 523, 560, 603, 645, 690, 734, 778, 822, 865, 955. 990, 1043, 1087, 1129.

Microscopical pathology, Dr. Watts on, and the use of the microscope in the diagnosis of disease of the lungs, 33.

Microscopical Society, papers read at the:—Mr. Anthony on a method of rendering delicate structures visible, 1032; Mr. Quekett on the intimate structure of bone, ib.

Military flogging, alleged death from, at Hounslow, 218; report of the inquest, 292; remarks on the case, 302; Mr. Day's remarks on, 346.

Milk, bad quality of that supplied to the Parisian hospitals, 288.

Milk, M. Dumas on the chemical composition of, 375.

Militia ballot, postponement of legislation on the subject of the, 218.

Milroy, Dr. on quarantine and the plague, reviewed, 981.

Mistaken identity, singular case of, 350.

Mitchell, Dr. on the propagation of scarlet fever, 613.

Mitral valve, Dr. Charles Bell on rupture of the chordæ tendinæ of the, 35.

Mode of keeping Plummer's pills, 32.

Moles, the tattooing of, on the skin, proposed by Pauli, 155.

Moody, Mr. T. N. notice of the death of, 480.

Moore, Dr. on consumption, reviewed, 1067; on phagedenic sphacelus, or hospital gangrene, 1005.

Moore, Mr. on the use of the body in relation to the mind, reviewed, 1070.
Morris's, Dr. case of hæmoptysis occurring in infants, 480.
Morgan's, Dr. case of rupture (?) of the uterus, 522.
Mortality in the army and navy, 931.
Mortality of children, and the increase of population, remarks on, 905.
Mortality, great, in Belgium, 687.
Mortality, rate of, in Paris, 784.
Mortality, on the influence of sex and local position on, 1033, 1082.
Muriatic acid gas, action for damage to vegetation by, 472.
Murder, trial for, by poisoning with arsenic, 442.
Murphy's, Dr. introductory lecture on the opening of the medical session at University College, 647.
Musket-ball, extraction of a, which had been lodged in the orbit for twenty-four years, 794.
Mushrooms, case of poisoning by, 385.

Nævi, subcutaneous, Sir B. Brodie on the treatment of, 216.
National Vaccine Board, report from the, 175.
National Institute of Practitioners in Medicine, Surgery, and Midwifery, meeting of the, 349.
Neumann, Dr. on the springs of Germany, reviewed, 71.
Nevins', Dr. objections to the use of gun-cotton in fire-arms, 907.
Nitrate of silver, Dr. Heller on the internal and external employment of, 170.
Nitrate of potass, inhalation of the fumes of, in spasmodic asthma, 431.
Nitre, recovery from a large dose of, 394.
Nitric acid, Dr. Puchelt's case of poisoning by, 459.
Nitrate of silver, employment of, in cases of erysipelas, 544.
Noble, Mr. on the brain and its physiology, reviewed, 803.

Obituary:—Dr. Thomas, 43; Dr. Domville, ib.; Mr. Marsh, ib.; Domingos Ribeiro dos Guimaraes Peixoto, 219; M. Benzenberg, ib.; Sir Thomas Grey Knight, ib.; Dr. J. Bostock, 308, 352; Dr. Thibert, ib.; Dr. Alexander, ib.; Dr. Nevinson, 352; Dr. Gasté, ib.; M. Rambaud, ib.; M. Martin, ib.; M. Viton, ib.; Mr. Langstaff, 396; Mr. Jackson, 439; Mr. T. N. Moody, 480; Dr. Favell, 555; Mr. James Kittle, ib.; M. C. Derosne, 599; Mr. Heaslop, 642; Dr. Meeson, 688; Mr. Braikenridge, ib.; Dr. John Thomson, 729; Dr. Bexell, 730; Dr. Payen, ib.; Dr. Gaubrie, ib.; Dr. Berard, ib.; Dr. George M. Burrows, *818; Mr. Martin, ib.; Mr. Shore, ib.;* Mr. Honeywood, ib.; Mr. Poirson, ib.; Dr. Lapointe, ib.; Mr. Lilly, 954; Prof. Tommasini, 1108; Dr. Foley, ib.
Obstetric forceps, information from a correspondent as to the inventor of the, 85.
O'Ferrall's, Dr. case of intestinal fistula cured by compression, 601.
Oil of turpentine, Mr. Stewart on the employment of, as a styptic, 128
Oldham's, Dr. case of extra-uterine fœtation, 853; observations on two forms of dysmenorrhœa, 919, 970.
Opacity, congenital, of the cornea, Dr. Maclagan's case of, 162.
Opium, vinegar in poisoning by, 682.
Opium, deaths from poisoning by, 812.
Organic analysis, determination of the melting points of fatty substances in, 395.
Orfila, Professor, dinner to, at Madrid, 862; degree of Doctor of the University of Madrid conferred on, 954.
Ormerod's, Mr. clinical collections and observations in surgery, reviewed, 627; election of, as surgeon to the Radcliffe Infirmary, 1003.
Orpen, Dr. on the treatment of caries of the teeth, 554.
Osborn, Mr., on the presence of atmospheric air and uncombined chloric acid in the water of the wells of Southampton, 551.
Os hyoides, M. Rozat's case of necrosis and expulsion of the, 343.
Ovariotomy, Mr. Solly's clinical lecture on, 51.
Ovarium, clinical lecture by Mr. C. Hawkins on excision of the, 735.
Ovarian cyst, death from the effusion of an, after tapping, 884.
Oxalic acid in the rhubarb or pie plant, 40.
Oxalate of lime calculi, Dr. Venables on, 173.

Paget's, Dr. records of Harvey, reviewed, 718.
Parisian hospitals, statistics of the, 554.
Paraplegia, Mr. Cæsar Hawkins' clinical remarks on some cases of, 133, 309.
Parkes, Dr. on the dysentery and hepatitis of India, reviewed, 28.
Parkin, Dr. on the antidotal treatment of the epidemic cholera, reviewed, 339.
Pathological Society of London, papers read at the:—The president's address, 771; Mr. Liston's case of stricture of the œsophagus, 774; Dr. Peacock's case of fracture of the neck of the femur, ib.; Dr. Peacock's case of post-pharyngeal abscess, ib.; Dr. Quain's case of rupture of the heart, ib.; Dr. Oldham's case of extra-uterine fœtation, 853; Dr. Bentley's case of cancrum oris, 854; Mr. Prescott Hewett on a large fibrous polypus of the small intestine, ib.; clot in the pons varolii, 855; Dr. C. J. B. Williams' case of diseased heart, ib.; Dr. Herbert Davies' case of communicating ulcer be-

tween the stomach and colon, 856; Mr. Busk on a peculiar form of granular kidney, 857; Mr. Crisp on a case of rupture of the left ventricle of the heart, ib.; case of omental hernia, ib.; Dr. Lever's case of rupture of the uterus, 946; Dr. Ramsbotham's rare case of uterine disease, ib.; Mr. Boyd on a case of aneurism of the aorta, 949; Mr. Ward's case of fibrous tumor of the lower jaw, 950; Dr. George Johnson's microscopical and chemical examination of a kidney affected by morbus Brightii, ib.; case of congenital malformation of pelvis, 951; Dr. Bence Jones' case of extensive extravasation of blood in the brain, ib.; Mr. Smith's case of premature closure of foramen ovale, 1076; Dr. Peacock's cases of malformation of the heart, 1077; Mr. Crisp's specimens of diseased heart, 1078; Dr. Ramsbotham on a malformation in an infant's heart, 1078; Mr. Partridge's preparations, 1079; Mr. Busk's three specimens, ib.
Parker's, Mr. case of apoplexy of the pons varolii, 389.
Patent medicines, action for the recovery of the value of, 553.
Pathology, on the study of, the formation of pathological societies, and remarks on the Pathological Society of London, 83.
Pauper lunatics, statistics of, 511.
Payen, Dr. notice of the death of, 730.
Pearl, Mr. on the treatment of calculus in the female, 906.
Peacock's, Mr. case of fracture of the neck of the femur, 774; on a case of post-pharyngeal abscess, ib.
Pelvimeter, a new, 777.
Pelouze, M. observations by, on gun-cotton, 862.
Penis, Mr. Kirk's case of sloughing of the, 623.
Perforation of the intestine, Dr. Zartmann's case of, 556.
Pestis bovina, inoculation for, 195.
Peschel's elements of physics, reviewed, 718.
Pfeufer, M. case of aneurism of the basilar artery, 388.
Pharmacy in Prussia, 687.
Phillips's, Mr. observations on the Edinburgh pharmacopœia, reviewed, 500; note from, respecting the review of his observations on the Edinburgh pharmacopœia, 598.
Phillips's, Mr. Benjamin, clinical lectures:—cancer of the breast, 691; delirium tremens, 867; on a case of severe injury to the spine, &c. 955; on a case of severe injury to the head, 787.
Phosphorus, alleged poisoning by the vapour of, 727.
Phosphorescence of the human body, Dr. M'Cormack on the, 617.
Phosphorescence of sea-water, 688.
Phosphorus vapour, M. Dupasquier on the effects of, 511.
Phthisis, deaths from, as compared with the total deaths in various countries, 733.
Phthisis, Mr. Evans's pathological propositions relating to, 821.
Physicians, alliance of, with druggists and quacks, 87.
Pilcher's, Mr. case of diabetes, 683; case of extensive carcinomatous disease, 988.
Pills or extract of copaiba, method of covering, with gelatine, 95.
Pittard, Mr. on osseous union of the fractured neck of the thigh-bone, 904.
Pleuro-pneumonia, case of, treated without venesection, 722.
Pleuro-pneumonia, Mr. Hunter on the treatment of cases of alleged, 814.
Plague, victims of the, at Marseilles, 687.
Placenta prævia, Mr. Jay's case of, 344.
Plummer's pills, mode of keeping, 32.
Poisoning, more cases of, 41.
Poisoning, accidental, at the Val-de-Grace, 219.
Poisoning by belladonna, 393, 435.
Poisoning by nitric acid, Dr. Puchelt's case of, 459.
Poisoning, case of, by lead shot left in a bottle, 542.
Poisoning, case of, by the roots of the parsnip, 687.
Poisoning, alleged, by the vapour of phosphorus, 727.
Poisoning, cases of, by opium and laudanum, 813.
Poisoning by mushrooms, 835.
Poisons, dangerous consequences of free trade in, 812.
Poirson, Mr. notice of the death of, 818.
Position, influence of, upon the femoral and inguinal rings, 742.
Potato disease in France, 50.
Potato disease in 1846, 308.
Preliminary stipulation for medical fees, 86.
Prescription, a secundum artem, 1083.
Presidentship of the Royal Society, note from the Marquis of Northampton respecting the, 686.
Price, Mr. on the mark produced by the umbilical cord during delivery, 40.
Promotions under the Brevet, 862.
Prieger, Dr. on the mineral waters of Kreuznach, reviewed, 336.
Provincial Medical and Surgical Association, anniversery meeting of the, 349, 432.
Progress of the cholera, 82.
Progress of the cholera, Dr. Copland on the, 341.
Prosecutious by the Apothecaries' Society, editorial observations on, 160.
Prussic acid, experiments on the new antidotes for, 394.
Public health, state of the, in the spring quarter, 261.

Public health, editorial articles on the state of the, in the metropolis, 288, 335.
Public health, state of the, during the summer quarter, 859.
Puchelt's' Dr. case of poisoning by nitric acid, 459.
Pulmonary artery, Dr. Chevers' collection of facts illustrative of the morbid conditions of the, as bearing upon the treatment of cardiac and pulmonary diseases, 189, 276, 369, 452, 699, 744, 828, 961, 1068.

Quack aurists, 350.
Quackery, an ancient relic on the suppression of, 919.
Quain's, Dr. case of rupture of the heart, from muscular exertion, 774; surgical anatomy of the human body, reviewed, 843; appointment of, as physician to St. George's and St. James's Dispensary, 1048.
Quarantine laws, editorial observations on the correspondence respecting the, 201.
Quarantine laws in Spain, 218.
Quarantine regulations, report of the Committee of the Leith Chamber of Commerce on, 349.
Quarantine regulations, Sicilian, 459.
Quassia, injections of, recommended for the removal of intestinal worms, 754.
Quekett, Mr. on the intimate structure of bone, 1032.
Quinine, amorphous, Mr. Redwood on, 256.

Ramsbotham's, Dr. F. H. case of uterine disease, 946.
Rape on an idiot, trial for, 639.
Rectus femoris, Mr. Highmore on Mr. Grantham's case of rupture of the tendon of the, 775.
Redwood, Mr. on amorphous quinine, 250.
Reed, Mr. M'Connell, on fever, reviewed, 1068.
Rees, Dr. G. O. on the diagnosis of Bright's disease, and its relation to albuminous urine, 102.
Registration of deaths, 1037.
Regulation of the profession, editorial observations on the, 466.
Reid's, Dr. cases of aneurism of the aorta, 550.
Renaud, Dr. on ulcerated carcinoma of the uterus, 34; case of convulsive hysteria, 214; case of peritonitis, 384; case of apoplectic mole, 551.
Renzi, Dr. liberation of, 862.
Reviews:—Dr. Parkes on the dysentery and hepatitis of India, 28. Dr. Neumann on the springs of Germany, 71. Dr. Fergusson's notes and recollections of a professional life, 118. Dr. Kramer's contributions to aural medicine, 162. Dr. Warden on the application of prismatic reflection to the investigation of diseases *in the open cavities of the body*, 165. Mr. Adams on tubercle of the brain of children, 166. Dr. Guy on the health in towns, 168. Dr. Wilson's medical notes on China, 204. Dr. Watson on the cure of cataract, 208. Hints for pedestrians, 210. Dr. Hooper's physician's vademecum, 211. Liverpool health of towns' advocate, 249. Mr. May's statistical report of the surgical in-patients of the Royal Berkshire Hospital, 250. Dr. Aldridge's lectures on the urine, &c. ib. Dr. Siebert's art of diagnosis in medicine, 253. Meade's manual for students, 291. Dr. Barker's address to the medical profession, 335. Dr. Stilling on the structure and functions of the medulla oblongata, ib. Dr. Prieger on the mineral waters of Kreuznach, 336. Dr. Clay on the use of inspissated gall, 337. Dr. Parkin on the antidotal treatment of the epidemic cholera, 339. Biographical sketch of the late Dr. Graham, 379. M. Wolkoff's reply to M. Flourens, 380. Mr. Hassall's microscopic anatomy of the human body, 381. Dr. Esdaile on mesmerism in India, 419. M. Broeckx's memoir on the invention of the obstetric forceps, 422. Sir James Clark on the sanative influence of climate, 468. Dr. Lane's life at the water-cure, 498. Dr. Robertson's guide to the Buxton waters, 500. Mr. Phillips's observations on the Edinburgh pharmacopœia, ib. Mr. Tuson on the structure and functions of the female breast, 545. Dr. Roger on the temperature of infants, 584. Hand-book for bathers, 589. Mr. Ormerod's clinical observations and collections in surgery, 627. Prof. Chelius's system of surgery, 630. Dr. Bone's inaugural dissertation on yellow fever, 676. Dr. Coley's treatise on the diseases of children, 678. Mr. Liston's practical surgery, 679. Dr. Griffith's practical manual, 682. Mr. Bridgman's guide for the proper treatment of the teeth, 683. Dr. Gregory' elements of the theory and practice of medicine, 713. Mr. Paget's records of Harvey, 718. Peschel's elements of physics, ib. Mr. Beck on the nerves of the uterus, 763. Mr. Leeson on Liebig's physiology, 767. Mr. Noble on the brain and its physiology, 803. Mr. Joseph on the blood, 808. Sir George Ballingall's introductory lecture to a course of military surgery, ib. Mr. Sparkes' introduction to chemistry, 810. Dr. Mackness's moral aspects of medical life, ib. Mr. Quain's surgical anatomy of the human body, 843. Professor Liebig's chemistry and physics in relation to physiology and pathology, 843. Professor Graham's elements of physics, 845. Dr. Madden's homœopathy viewed in connection with medical reform, 884. Mr. Edwin Lee's practical observations on

mineral waters and baths, 887. Mr. Griffiths on the chemistry of the four seasons, 888. Mr. Franks on urino-genital diseases, ib.. Malgaigne's manual of operative surgery, 936. Dr. Golding Bird on urinary diseases, 938. Von Behr's handbook of human anatomy, 939. Dr. Royle's manual of materia medica and therapeutics, ib. Cosmos, translated by Col. Sabine, 978. Health and sickness of town populations considered, 980. Dr. Milroy on the quarantine and plague, 981. Dr. Guy on medical education, ib. Swedenborg on the economy of the animal kingdom, ib. Baron Liebig's animal chemistry, 1018. Dr. Carpenter's principles of human physiology, 1024. Mr. Fletcher on cruelty to animals, ib. Mr. Gower's scientific phenomena of domestic life, ib. Vogel's pathological anatomy, translated by Dr. Day, 1065. Mr. Moore on consumption, 1067. Dr. Kennedy on the epidemic cholera, 1068. Mr. M'Connell Reed on fever, ib. Dr. Moore on the use of the body in relation to the mind, 1070; Mr. Robinson on the teeth, 1100.

Revaccination, editorial remarks on the alleged necessity for, 494.

Revaccination, Dr. Kennedy's case of, followed by untoward symptoms, 515.

Rewards of medical services by the State, 998.

Ribeiro dos Guimaraes Peixto, notice of the death of, 219.

Richard, Mr. on the treatment of bursal disease of the knee-joint, 510.

Robinson, Dr. George, on the nature and principles of treatment of inflammation, 14, 65, 243, 410, 535, 704, 1008.

Robinson's, Mr. case of diseased liver, 720.

Robertson's, Dr. Guide to the Buxton waters, reviewed, 500.

Rœsch's, Dr. conclusions on small-pox and vaccination, 909.

Roger, Dr. on the temperature of infants, reviewed, 544.

Rose's, Mr. case of ulceration of the uterus, 1097.

Royle's, Mr. manual of materia medica and therapeutics, reviewed, 939.

Royal Medical and Chirurgical Society, papers read at the:—Mr. Toynbee on the internal structure of the human kidney, and the changes which its several parts undergo in Bright's disease, 32; Mr. Dixon on a case in which a large tumor was developed in the structure of the fifth nerve, and its ganglion, 122; Dr. Fuller's case of enormous enlargement of the spleen and liver, ib.; Mr. Busk's case of an abscess in the neck communicating with the aorta by an ulcerated opening, 123; Mr. Cumming on a luminous appearance of the human eye, 124; Dr. Snow's case of strangulation of the ileum, 125; Mr. Busk's case of con

deficiency of the left kidney
Hewett on two remarkable
encephaloid disease of the l
Dr. Aldis's case of perito
purulent effusion, 890; Mr. S
of traumatic paraplegia,
Dixon's case of injury to the
Dr. Davies' account of two h
dwarf, ib.; Mr. Arnott's cas
in the brain, 984; Mr. Alla
disease and stricture of the
ileum, 1072; Mr. Curling's ca
internal strangulation, ib.

Royal College of Surgeons, electi
bers of council, 218.

Royal College of Surgeons, appo
officers for the ensuing year, 1

Royal College of Surgeons, gen
mitted members, 44, 88, 13
265, 309, 352, 645, 690, 865,
998, 1086, 1129.

Royal College of Physicians,
two Fellows, 218.

Royal College of Chemistry, Pr
on the influence of science upo
gress of national industry, 74.

Royal College of Chemistry, ann
meeting of the, 434.

Royal Academy of Medicine, a
of M. Malgaigne to the chai
vacant by the death of Baron l

Royal Society, anniversary meeti
997.

Rozat's, M. case of necrosis and
of the os hyoides, 343.

Rowland's, Dr. remarks on co
gestion, 489, 550.

Rubeola and scarlatina, a point of
between, 699.

Rupture of the bladder, Mr. Bird's
from external violence, 770.

Rupture of the tendon of the tric
muscle, Mr. Grantham on, 670.

Salivary glands, Mr. C. H. Jo
structure of the, 59.

Sale of medicines by medical pra
editorial article on the subject o
Sanitary congress, and the laws
tine, 375.

Sanatory condition of Philadelphi
the effects of bad drainage, 55

Scarlet fever, Dr. Mitchell on the
tion of, 613.

Schools of medicine in the Unit
statistics of, 477.

Schaffer, Dr. on the post-morte
ances after death from lightnin

Schonbein's, M. letter to M. D
specting his method of converti
cotton into a substance resem
powder, 803.

Sciatica, clinical remarks by D
Thomson on a case of, treated
126.

Scientific congress at Genoa, 580.
Science, professor Knapp on the influence of, upon the progress of national industry, 74.
Scirrhoidal disease, Dr. Coley's case of, affecting the mucous membrane of the vagina and cervix uteri, 415.
Sclerema neonatorum, Dr. T. Ogier Ward on, 216.
Scotch epidemic fever, Dr. Wardell on the, 155, 196, 461, 617, 792, 1053.
Scrofula, Dr. Laycock's clinical lecture on, 911.
Sea-water, phosphorescence of, 688.
Searle, Dr. on the treatment of Asiatic cholera, 596.
Searle's, Mr. case of serous apoplexy, 989.
Seitz's, Dr. microscopic examination of the contents of exanthematous vesicles and pustules, 642.
Senile gangrene, Sir B. Brodie on the employment of carded wool in, 39.
Shore, Mr. notice of the death of, 818.
Sharkey's, Dr. short notes of the climate and diseases of Jersey in 1845, 538.
Sickness at Algiers, 729.
Sicilian quarantine regulations, 459.
Siebert's, Dr. art of diagnosis in medicine, reviewed, 253; description of the itch constitution, 778.
Silvester's, Dr. paper on venous bruit, 894.
Skey, Mr. on the treatment of varicose veins, 236; on the treatment of bursal disease of the hip-joint, 365.
Skull, case of compound fracture of the, treated in St. Bartholomew's Hospital, 77.
Skull, Mr. Stuart's case of compound fracture of the, 320.
Small-pox in France, 58.
Small-pox and vaccination, Dr. Roesch's conclusions on, 909.
Small-pox, modified case of, 909.
Smee, Mr. Alfred, on gutta percha splints, 996.
Smith, Mr. on a case of iliac abscess, 595.
Smith, Dr. elected physician to the Cheltenham General Hospital and Dispensary, 759.
Smith's, Dr. account of a case in which a bursal tumor was removed from the patella with a fatal result, 951.
Snell's, Dr. case of extensive laceration of the organs of generation, 622.
Snow's, Dr. case of strangulation of the ileum, 125; on alkalescen turine and phosphatic calculi, 852, 877; case of strangulation of the ileum in an aperture of the mesentery, 1049.
Society of Apothecaries, editorial observations on the objections made by the, to the medical registration bill, 709.
Solly's, Mr. clinical lecture on ovariotomy, 51; case of traumatic paraplegia, with the post-mortem appearances, 891.
Souberbielle, *notice of the death of*, 219.
South London Medical Society, papers read at the:—Mr. Robinson's case of diseased lung, 720; Mr. Cock's case of strangulated hernia, 849; Dr. Silvester on venous bruit, 894; Mr. Searle's case of serous apoplexy, 989; Mr. Crisp's case of infantile pleurisy, 1104.
Sparkes', Mr. easy introduction to chemistry, reviewed, 810.
Spasmodic asthma, inhalation of the fumes of nitrate of potass in, 431.
Spina bifida, case of, successfully operated for, 343.
Spine, cases of injury to the, treated at St. Bartholomew's Hospital, 79.
Spine, Mr. Hare's cases of angular projection of the, 106.
Spine, clinical observations by Mr. B. Phillips on a case of severe injury to the, 955.
Spleen and liver, Dr. Fuller's case of enormous enlargement of the, 123, 404.
Spleen, supplementary, Dr. Bainbrigge's case of, 1052.
Stackler, Dr. on the use of the black oxide of mercury in the vomiting of preanancy, 437.
Statistics of pauper lunatics, 511.
Statistics of schools of medicine in the United States, 477.
Statistics of the Parisian hospitals, 554.
Statistics of the venereal disease, 731.
Statistics of apoplexy and hemiplegia, 733.
Stapleton's, Dr. case of compound dislocation of the ankle-joint, 601.
State of the public health in the metropolis, 204.
Stilling, Dr. on the structure and functions of the medulla oblongata, reviewed, 335.
Stewart, Mr. on the oil of turpentine as a styptic, 128.
Stopping the teeth, Dr. Talma on the injurious effects of mercurial amalgam for, 260.
Strangulated hernia, Dr. Warren's cases of, with some remarks principally intended to show the necessity of an early resort to the operation, 17, 148, 238.
Strangulation of the ileum, Dr. Snow's case of, 125.
Strangulated congenital hernia in a child six weeks old, requiring operation, 171.
Straw splints for fractures, 556.
Stuart's, Mr. case of compound fracture of the skull, 320.
Sulphur, action of, upon potash, soda, and their carbonates, 438.
Sulphuric acid, Professor Lippich on the treatment of aphthæ by, 43.
Sulphuric acid, case of recovery from a dose of concentrated, 81.
Sulphurets, production of, on metallic bodies struck by lightning, 395.
Summer diarrhœa, cholera, and typhus, Dr. Laycock's clinical remarks on, 227.
Swedenborg, M. on the economy of the animal kingdom, reviewed, 981.

Syme, Mr. on the reduction of old dislocations, 602; case of lithotomy in the female, 820.
Syphilis, Dr. Egan on, as contracted from nursed children, 478.
Syphilis, constitutional, in the father producing syphilis in the offspring, 1041.
Syphilis, sanitary regulations respecting, 1108

Talma, Dr. on the injurious effects of mercurial amalgam for stopping the teeth, 260.
Tannate of iron, employment of, in the treatment of chlorosis, 728.
Taylor's, Mr. A. S. lectures on medical jurisprudence — see "Medical jurisprudence, Mr. A. S. Taylor's lectures on."
Teeth, Dr. Talma on the injurious effects of mercurial amalgam for stopping the, 260.
Tensions, physiological and pathological, Mr. T. W. King on, and on glandulæ pacchioni, 21.
Testel, M. on the cause of the failure of vaccination in France, 393.
Thomson's, Dr. A. T. clinical remarks on a case of ichthyosis fortuita, treated with the decoction of the root of the rumex obtusifolius, 36; clinical remarks on a case of sciatica treated with moxas, 126.
Thomson, Dr. on the contagious propagation of cholera, 952.
Thomson, Dr. John, notice of the death of, 729.
Thomas, Mr. notice of the death of, 43.
Thibert, M. notice of the death of, 308.
Todd's, Dr. clinical lecture on a case of cardiac dissecting aneurism, 358.
Tomes', Mr. lectures on dental surgery—see "Dental physiology and surgery."
Toothache, remedy for, 728.
Toynbee, Mr. on the internal structure of the human kidney, and the changes which its several parts undergo in Bright's disease, 32.
Tuckwell, Mr. on the use of the preparations of iron in fever, 173.
Tumor, large, on the side of the neck, removed at St. Bartholomew's Hospital, 78.
Traumatic tetanus, case of, successfully treated, 263.
Travers, Mr. Benjamin, jun. on the use of tobacco in tetanus, 1095.
Trials and inquests: — action for alleged malapraxis, 32; the Gosport duel case, 174; hernia insurance case, ib.; unlicensed practice—mistaken strangulated hernia, 254; the alleged death from military flogging at Hounslow, 292; legal question on the license of the Apothecaries' Society, 385; poisoning by arsenic, 424; action for damage to vegetation by muriatic acid gas, 472; results of interments in towns, 508; action for the recovery of the value of patent medicines, 553; charge preferred by a physician against a surgeon for malapraxis, 634; rape on an idiot, 639; death from delirium tremens following slight personal injuries, 811; charge of child-murder, 897; trial for murder by poisoning with arsenic, 1027.
Tuson, Mr. on the structure and functions of the female breast, reviewed, 545.
Tumor, soft scirrhous, removed from the palate by ligature, 836.
Tyerman's, Dr. W. F. case of amputation for fungoid disease of the arm of an insane patient, 875.
Tympanitis, treatment of, by puncture, 721.
Typhus fever in Berkshire, Mr. Brenchley on the, 1082.

Ulna, dislocation of the, 707.
University of London, examinations for the degree of M.B., 257, 348, 393, 815, 908, 1038.
University of London, list of candidates who have passed the examinations for the degree of Doctor of Medicine, 997.
University of Cambridge, subject for the Thurston speech, 997.
Unger's, Dr. case of poisoning by the roots of the parsnip, 687.
Unlicensed practice, trial for, in a case of mistaken strangulated hernia, 254.
Urinary abscess and fistulæ, Mr. Cæsar Hawkins's clinical remarks on, 221.
Urinary fistulæ, treatment of, 657.
Urine, blood, and fæces, Dr. Heller's analysis of, in cholera sporadica, 305.
Urine, influence of alcohol upon the secretion of, 430.
Urine, alkalescent, Dr. Snow on, and phosphatic calculi, 852, 877.
Urine, economical employment of, in agriculture, 623.
Urine, Dr. Heller's analysis of the, in dropsy after small-pox, 215.
Urine, Dr. Heller's analysis of the, in land-scurvy, 514.
Urine, blood, and dropsical fluid in morbus Brightii, Dr. Heller on the, 316.
Uterus, Dr. Renaud's case of ulcerated carcinoma of the, 34.
Uterus, results of extirpation of the, 200.
Uterus, Dr. Coley on passive congestion of the, 492.
Uterus, Dr. Morgan's case of rupture (?) of the, 522.
Uterus, imperforate, case of, occurring in a second pregnancy, 688.
Uterine respiration, case of alleged, 394.

Vaccination, M. Testel on the cause of the failure of, in France, 393.
Vaccinations, observations on the twelfth report of the Poor-Law Commissioners relative to, 881.
Vaccination, on the influence of, in diminishing the mortality from small-pox, 857.
Vaccinations in Turkey, 511.
Varicose veins of the fore-arm, Sir B. Brodie on, 172.

Varicose veins, Mr. Skey on the treatment of, 236.
Vegetation, action for damage to, by muriatic gas, 472,
Venables, Dr. on oxalate of lime calculi. 172.
Venereal disease, statistics of the, 731.
Vinegar in poisoning by opium, 683.
Vogel's, Dr. pathological anatomy, reviewed,
Vomiting of pregnancy, Dr. Stackler on the use of the black oxide of mercury in, 437.
Von Behr's hand-book of human anatomy, reviewed, 939.

Walchner, Mr. on the presence of arsenic and copper in all ores of iron, 763.
Walker, Mr. on iritis in infancy, 1014.
Wardell, Dr. on the Scotch epidemic fever of 1843-44, 155, 196, 461, 617, 792, 1053.
Ward, Dr. T. Ogier, on sclerema neonatorum, 216.
Warden, Dr. on the application of prismatic reflection to the investigation of diseases in the open cavities of the body, 165.
Warren's, Dr. case of strangulated hernia, with some remarks principally intended to show the necessity of an early resort to the operation, 17, 148, 238; on the bilateral operation of lithotomy, and on lithotomy in the female, 575.
Ward's, Mr. case of fibrous tumor of the lower jaw, 950.
Watts, Dr. on microscopical pathology, and the use of the microscope in the diagnosis of disease of the lungs, 33; case of large cavity in the lung, 211; case of aneurism of the arch of the aorta in process of cure, 846; case of acute endocarditis, 991; case of disease of the mitral aperture, 381.
Watson, Dr. on the cure of cataract, 208; on inflammation of the membrane of the aqueous humour of the eye, 818.
Welsh's, Mr. case of unsuspected dislocation of the femur, 416.
Westminster Medical Society, papers read at the:—Dr. Snow on alkalescent urine, and phosphatic urinary calculi, 852; Mr. Marshall's case of sudden death, 942; Dr. Frederick Bird on the diagnosis and pathology of ovarian tumors, 943; Mr. Hird on the pathology and treatment of croup, 988; Dr. Merriman's case of inversion of the uterus, 1080; Mr. Hancock's cases of disease of hip-joint, 1101.
Westminster Hospital, Dr. Basham on the distribution of prizes at the, 392.
Westminster Hospital, resignation of Mr. White, 997.
West, Dr. Charles, election of, as physician to the Middlesex Hospital, 554.
Western General Dispensary, election of Dr. Hennen, 131.
White, Mr. notice of his resignation of the office of surgeon to the Westminster Hospital, 997.
Whitehead's, Mr. case of menorrhagia with fatal hæmorrhage, 549; case of cauliflower disease of the uterus, 992.
Wilkinson's, Dr. case of carcinoma of the bladder and urethra, 214.
Wilkinson, Mr. on the conversion of large muscles into bone, 993.
Wilson's, Dr. medical notes on China, 204.
Wildbore's, Mr. reports of cases treated in the Westminster Hospital, 671, 708, 787.
Willshire, Dr. Hughes, on a new era in therapeutical inquiry, 594.
Williams's, Dr. C. J. B. case of diseased heart, 854; address at the first meeting of the Pathological Society, 771.
Wines, M. Bouchardat on a method of detecting the admixture of water with, 439.
Winstone, Dr. on the treatment of cellular dropsy, 431.
Woodward, Dr. on insanity in children, 559.
Worms, intestinal, employment of quassia in, 754.
Wound of the bladder, case of recovery from, 709.
Wounds of arteries, ergotine as a styptic in, 260.
Wright's, Mr. case of imperforate uterus occurring in a second pregnancy, 688.
Wright's Dr. observations on the effects of the immoderate use of tobacco, 592.
Zartmann's, Dr. case of perforation of the intestine, 556.
Zimmerman, Dr. on the mode of conducting a pathological analysis of the blood, 20; on the action of the salts which dissolve fibrine, 67; on the composition of kystein, 451.

END OF VOL. XXXVIII.—VOL. III. N. S.

Wilson and Ogilvy, 57, Skinner Street, Snowhill, London.

MEDICAL APPOINTMENT.

Mr. Charles Brooke has been elected surgeon to the Metropolitan Free Hospital.

ROYAL COLLEGE OF SURGEONS.

The following gentlemen were admitted Members on Friday, December 18th:—J. Fumcane.—J. J. Mitchell.—T. A. Cammack.—H. Lambden.—W. D. Dibb.—T. Keavin.—W. B. Midwood.—T. W. Nunn.

APOTHECARIES' HALL.

Names of gentlemen who passed their Examination and received Certificates to practise on Thursday, December 17, 1846.—John Colston, Sheriff Hutton, Yorkshire.—George Frederick Hughes Brown, E. I. Company's Service.—Thomas Edw. Pearce, Martin, Hull.—William Bennett, London.

BIRTHS & DEATHS in the Metropolis

During the week ending Saturday, Dec. 12.

Births.		Deaths.		*Aver. of* 5 *yrs.*	
Males....	615	Males....	614	Males.....	493
Females .	637	Females .	549	Females .	475
	1252		1163		968

Deaths in different Districts.

(34 *in number;—Registrars' Districts*, 129. *Population, in* 1841, 1,915,104.)

West—Kensington; Chelsea; St. George, Hanover Square; Westminster; St. Martin in the Fields; St. James .. (Pop. 301,326)	172
North—St. Marylebone; St. Pancras; Islington; Hackney ...... (Pop. 366,303)	210
Central—St. Giles and St. George; Strand; Holborn; Clerkenwell; St. Luke; East London; West London; the City of London .... (Pop. 374,759)	217
East—Shoreditch; Bethnal Green; Whitechapel; St. George in the East; Stepney; Poplar .... Pop. 393,247)	273
South—St. Saviour; St. Olave; Bermondsey; St. George, Southwark; Newington; Lambeth; Wandsworth and Clapham; Camberwell; Rotherhithe; Greenwich .... (Pop. 479,469)	291
Total	1163

Causes of Death.

Col. a. Weekly Averages of 5 Autumns; Col. b. of 5 Years

		A.	B.
All Causes	1163	1000	968
Specified Causes	1159	992	961
1. *Zymotic* (or Epidemic, Endemic, Contagious) *Diseases* ..		206	188
Sporadic Diseases, viz.—	191		
2. Dropsy, Cancer, &c. of uncertain seat	113	104	104
3. Brain, Spinal Marrow, Nerves, and Senses	150	151	157
4. Lungs, and other Organs of Respiration	416	313	294
5. Heart and Blood-vessels	63	29	27
6. Stomach, Liver, and other Organs of Digestion	80	70	72
7. Diseases of the Kidneys, &c...	11	8	7
Childbirth, Diseases of the Uterus, &c.	16	11	10
9. Rheumatism, Diseases of the Bones, Joints, &c...........	6	6	6
10. Skin, Cellular Tissue, &c.	4	2	2
11. Old Age	66	66	67
12. Violence, Privation, Cold, and Intemperance	43	27	26

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	3	Convulsions	46
Measles	12	Bronchitis	106
Scarlatina	25	Pneumonia......	114
Hooping-cough..	37	Phthisis	139
Typhus	59	Dis. of Lungs, &c.	16
Dropsy..........	23	Teething........	5
Sudden deaths ..	12	Dis. Stomach, &c.	7
		Dis. of Liver, &c.	12
Hydrocephalus ..	23	Childbirth	10
Apoplexy........	25	Dis. of Uterus, &c.	4
Paralysis........	26		

Remarks.—The total number of deaths was 163 above the autumnal and 195 above the annual average. The increase of deaths has arisen from diseases affecting the organs of respiration. In all the districts, the mortality was above the averages.

METEOROLOGICAL SUMMARY.

Mean Height of Barometer	29·78
„ „ Thermometer[a]............	35·9
Self-registering do.[b] ...... max. 55·2	min. 16°
„ in the Thames water „ 39·8	„ 36°

[a] From 12 observations daily. [b] Sun.

Rain, in inches, ·15: sum of the daily observations taken at 9 o'clock.

Meteorological.—The mean temperature of the week was 3·4° below the mean of the month (39·3°). The extreme hebdomadal range in the self-registering thermometer was 39·2° The thermometer reached its lowest point, 16°, on Saturday, the 12th instant.

NOTICES to CORRESPONDENTS.

Owing to the space occupied by the Index in the present number, we have been obliged to postpone the communications of Mr. Sibson, Mr. Snell, Mr Bainbrigge, Mr. J. L. Levison, Mr. H. J. Jenkins, Dr. Coley, Mr. Robert Storks, and Dr. Greenhow.

Dr. G. H. Adams's paper on the effects of Acetate of Lead in Hæmorrhagic Diathesis will be inserted.

Esculapius.—We are obliged by the communication, but we do not see how our correspondent's view of this alleged cause of sterility is reconcileable with the well known fact, that contact of the spermatic secretion with the vagina is sufficient for impregnation. We refer our correspondent to Carpenter's Principles of Human Physiology, page 714.

Will M.R.C.S. oblige us by communicating his name and address in confidence.

The second Lecture of Sir Benjamin Brodie's Course will appear in the following number.

Mr. Charles Branston's (Chard) letter has been received.

MEDICAL.—Wanted immediately, by a gentleman in extensive country practice, a VISITING and DISPENSING ASSISTANT.—Address, D. Scott Smith, Esq., Eastwood, near Nottingham.

THE MEDICAL REGISTRATION BILL as altered and about to be introduced into the House of Commons—English, Irish, and Scotch Degrees, Diplomas, and Licences. A copy of this Bill, so important to all Members of the medical profession, and so threatening to all classes of unqualified practitioners, will be published in THE LANCET of Saturday, January 2d; being No. 1 of that Journal for 1847, price 7d; Stamped for post, 8d: Subscriptions by the year, by the half-year, or quarter, may commence at any date. An Account of all the proceedings in Parliament relative to the Medical Registration Bill will regularly appear in THE LANCET. Orders may be given to any Bookseller or Newsman in Town or Country.

ADVERTISEMENTS.

On the First of January, price 6s.

THE MEDICO-CHIRURGICAL REVIE

AND

JOURNAL OF PRACTICAL MEDICINE.

NEW SERIES, No. IX.

Contents.

- I. Hewson's Works, edited, with Notes, by George Gulliver, F.R.S.—T. Wharton on the Blood.
- II. Health of Towns—Lord Lincoln's Sanatory Bill, &c.
- III. Dr. Latham on the Diseases of the Heart.
- IV. Jacquemier, Manuel des Accouchements et des Maladies des Femmes Grosses —Négrier, Recherches et Considérations sur la Constitution et les Functi l'Utérus.
- V. Ormerod's Clinical Collections and Observations in Surgery.
- VI. Recueil de Mémoires de Médecine, de Chirurgie et de Pharmacie Militaire, Vol
- VII. Guy's Hospital Reports, 2d Series, Vol. IV.
- VIII. Dr. Underwood on Diseases of Children.—Dr. Donné, Conseils aux Mères sur et sur la Manière d'Elever les Enfans Nouveau-nés.
- IX. Dr. Glover on the Pathology and Treatment of Scrofula.
- X. Liebig's Animal Chemistry.—Dr. R. D. Thomson on the Food of Man and Anim
- XI. Dr. Marshall Hall's Observations and Suggestions in Medicine.
- XII. Report of the Registrar-General of Births, Marriages, and Deaths.
- XIII. Professor Marx's Moral Aspects of Medical Life.—Life of Dr. George Cheyne.
- XIV. Cooper on Near Sight, Aged Sight, and Impaired Vision.—Little's Manual of D Eye.—Annales d'Oculistique.
- XV. Wilson on the Diseases of the Skin.
- XVI. Medico-Chirurgical Transactions, Vol. XXIX.
- XVII. Royle's Manual of Materia Medica.

NOTICES OF—Hassall's Microscopic Anatomy.—Carpenter's Human Physi Hand-Book of Anatomy.—Dr. Moore on the Use of the Body in relation to Mulder's Reply to Liebig.—Griffith's Chemistry of the Four Seasons.—Kee demic Cholera.—Smee on the Potato Disease.—Humboldt's Cosmos.—Bush pathy.—Turnbull on Diseases of the Lungs.

Selections from Foreign Journals, &c.

London: S. Highley, 32, Fleet Street. Edinburgh: Sutherland and K
Dublin: Hodges and Smith.

On the First of January, Volume 4,
post 8vo. 6s. 6d. cloth,

DR. RANKING'S HALF-YEARLY ABSTRACT of the MEDICAL SCIENCES.

London: John Churchill, Princes Street, Soho.

On January 1st will be published, fcp. 8vo. 12s. 6d. cloth, illustrated with 102 Engravings, plain and coloured,

OPHTHALMIC MEDICINE and SURGERY. By WHARTON JONES, F.R.S.

London: John Churchill, Princes Street, Soho.

This Day is published, in 1 vol. 8vo. 8s. cloth,

CLINICAL FACTS and REFLECTIONS; also, Remarks on the Impunity of Murder in some Cases of Presumed Insanity. By THOMAS MAYO, M.D. F.R.S. Fellow of the Royal College of Physicians, and late Fellow of Oriel College, Oxford.

Longman, Brown, Green, and Longmans.

Just published, 8vo. price 10s.

THE NATURE and TRE of GOUT. By W. H. Robe

"We have read this treatise wi rest, and we are sure that every the volume will allow that it is with information brought down period, and of a very practical that it is conveyed in an agreeable ing manner. It is difficult to sp part of the volume as more deserv than another, for all are ably done."

EDIN. MED. AND SU

London: John Churchill, Princes

TURNER'S CHEMISTRY.—Ne

Now ready, Part 1, (Inorganic C complete), 8vo. 15s. cloth

TURNER'S CHEMISTR Edition. By Baron LIEBIG, Chemistry in the University of WILLIAM GREGORY, M.D. Profe mistry in the University of Edinbur

*** Part 2 (Organic Chemistry co immediately follow.

Taylor and Walton, 28, Upper Go

Printed at the Office of Wilson and Ogilvy, 57, Skinner Street, Snowhill, in the
Sepulchre, in the City of London, by ELIEZER CHATER WILSON, 57, Skinner Stre
Printer; and published at 39, Paternoster Row, in the Parish of St. Gregory, in th
by WILLIAM LONGMAN, of 36, Hyde Park Square, in the County of Middlesex, Book
Friday, Dec. 25, 1846.

UNIVERSITY OF MICHIGAN
3 9015 06525 0683

The HF Group
Indiana Plant
T 075006 2 133
10/31/2006